TAPE REPRODUCER - MAINTENANCE PRACTICES

1. Removal/Installation Tape Reproducer

A. Remove Tape Reproducer

(1) Open passenger entertainment circuit breakers installed in circuit breaker panel on 28 vdc bus 1 and 115 vac Ø A bus 1.

WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

(2) Remove radio rack panel from shelf 3.

(3) Loosen and disengage knurled nut from mounting bracket on lower front panel.

(4) Pull unit out of mount.

B. Install Tape Reproducer

(1) Ensure that passenger entertainment circuit breakers are open.

(2) Inspect amplifier receptacle and mount connector for damage and presence of foreign objects.

(3) Install unit on mount and engage receptacle and connector.

(4) Engage knurled nut on bracket and tighten.

(5) Replace radio rack panel.

(6) Close passenger entertainment circuit breakers installed in circuit breaker panel on 28 vdc bus 1 and 115 vac ØA bus 1.

(7) Perform operational test (see 23-30-0).

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

   A. The tape reproducer is installed in the inboard radio rack on shelf 7.

2. Removal/Installation Tape Reproducer

   A. Remove Tape Reproducer

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 7.

      (3) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

      (4) Pull tape reproducer out of mounting rack.

   B. Install Tape Reproducer

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install tape reproducer on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

      (5) Close circuit breakers.

      (6) Install radio rack panel.

      (7) Perform passenger address and entertainment test procedure. (See 23-30-0.)

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

   A. The tape reproducer is installed in the outboard radio rack on shelf 5.

2. Removal/Installation Tape Reproducer

   A. Remove Tape Reproducer

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 5.

      (3) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

      (4) Pull tape reproducer out of mounting rack.

   B. Install Tape Reproducer

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install tape reproducer on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

      (5) Close circuit breakers.

      (6) Install radio rack panel.

      (7) Perform passenger address and entertainment test procedure. (See 23-30-0.)

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

   A. The tape reproducer is installed in the inboard radio rack on shelf 6.

2. Removal/Installation Tape Reproducer

   A. Remove Tape Reproducer

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 6.

      (3) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

      (4) Pull tape reproducer out of mounting rack.

   B. Install Tape Reproducer

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install tape reproducer on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

      (5) Close circuit breakers.

      (6) Install radio rack panel.

      (7) Perform passenger address and entertainment test procedure. (See 23-30-0.)

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

   A. The tape reproducer is installed in the aft cabin drop ceiling.

2. Removal/Installation Tape Reproducer

   A. Remove Tape Reproducer

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

      (3) Slide tape reproducer out of mounting rack.

   B. Install Tape Reproducer

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install tape reproducer on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

      (5) Close circuit breakers.

3. Test

   A. Perform passenger address and entertainment test procedure. (See 23-30-0.)

4. Adjust - Tape Tension Arms

   NOTE: Power will be removed from tape transport mechanism in reproducer if slack develops in tape. Slack can occur due to a momentary power interruption which exceeds 2 seconds duration.

   A. Remove tape reproducer from mounting rack as in Paragraph A.

   B. Remove right side cover from reproducer.

C. Take up slack in tape reel until tape tension arms move down to normal operating position as indicated by painted tape guideline. If tape requires splicing, repair as in Paragraph 5.

D. Replace cover and install reproducer in mounting rack as in Paragraph B. Test as in Paragraph 3.

5. Repair - Tape Splicing

A. Remove tape reproducer to a suitable work place.

B. Apply a small amount of chlorothene with a clean cloth to broken tape ends to remove silicone compound (used as a lubricating agent).

CAUTION: IF THE SILICONE IS NOT REMOVED, THE SPLICING TAPE WILL NOT ADHERE.

C. Trim broken ends of tape; place ends together with an overlap, shiny surface up, in a tape splicing maching (TSA4A Lunior) and operate tape cutter.

NOTE: The cutter makes a diagonal cut at 45 degrees. If the tape splicer is not available, make the cut with a pair of scissors while holding the tape pieces in accurate alignment.

D. Clear cut ends of tape from splicer and place a small piece (1/2" x 1/2") of cellulose Scotch Splicing Tape No. 41 over join area of tape ends.

NOTE: Maintain correct tape alignment if tape splicer is not used.

E. Operate splicer tape trimmer to remove excess Scotch tape.

NOTE: If a tape splicer is not used, make concave cuts in each tape edge at splicing point to remove exposed sticky surfaces.

F. Route tape through transport mechanism as indicated by painted guidelines, taking up slack at reels sufficiently to position tension arms correctly.

G. Replace cover and install reproducer in mounting rack as in Paragraph B. Test as in Paragraph 3.

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

A. The tape reproducer is installed in the forward cabin ceiling.

2. Removal/Installation Tape Reproducer

A. Remove Tape Reproducer

(1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

(2) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

(3) Slide tape reproducer out of mounting rack.

B. Install Tape Reproducer

(1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

(2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

(3) Install tape reproducer on mounting rack.

(4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

(5) Close circuit breakers.

(6) Perform passenger address and entertainment test procedure. (See 23-30-0.)

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

   A. The tape reproducers are installed in the inboard radio rack on shelf 6.

2. Removal/Installation Tape Reproducer

   A. Remove Tape Reproducer

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 6.

      (3) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

      (4) Pull tape reproducer out of mounting rack.

   B. Install Tape Reproducer

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install tape reproducer on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

      (5) Close circuit breakers.

      (6) Install radio rack panel.

      (7) Perform passenger address and entertainment test procedure. (See 23-30-0.)

TAPE REPRODUCER - MAINTENANCE PRACTICES

1. General

   A. The tape reproducers are installed in the inboard radio rack on shelf 5.

2. Removal/Installation Tape Reproducer

   A. Remove Tape Reproducer

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 5.

      (3) Loosen and disengage knurled nut from mounting bracket on lower front tape reproducer panel.

      (4) Pull tape reproducer out of mounting rack.

   B. Install Tape Reproducer

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check tape reproducer receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install tape reproducer on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front tape reproducer panel.

      (5) Close circuit breakers.

      (6) Install radio rack panel.

      (7) Perform passenger address and entertainment test procedure. (See 23-30-0.)

DISTRIBUTION AMPLIFIER - MAINTENANCE PRACTICES

1. General

   A. The distribution amplifier is installed in the inboard radio rack on shelf 6.

2. Removal/Installation Distribution Amplifier

   A. Remove Distribution Amplifier

      (1) Open passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 6.

      (3) Loosen and disengage knurled nut from mounting bracket on lower front distribution amplifier panel.

      (4) Pull distribution amplifier out of mounting rack.

   B. Install Distribution Amplifier

      (1) Ensure passenger entertainment circuit breakers located on radio dc bus 1 and radio ac bus 1 are open, tagged, and safetied.

      (2) Visually check distribution amplifier receptacle and mounting rack receptacle for damage and presence of foreign objects.

      (3) Install distribution amplifier on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front distribution amplifier.

      (5) Close circuit breakers.

      (6) Install radio rack panel.

      (7) Perform passenger address and entertainment test procedure. (See 23-30-0).

INTERPHONE - DESCRIPTION AND OPERATION

1. General

   A. Two interphone systems are provided for interphone communications. The service interphone system provides communication between areas where service and maintenance operations are more frequently performed. The cabin interphone system provides communications between the flight compartment and the cabin attendant stations.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

   A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

   B. The interphone amplifier is installed in the radio rack on shelf 7, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifer chassis. Electrical power is supplied by radio dc bus 1.

   C. Interphone jack outlets are installed in the flight compartment, nose wheel well, each engine nacelle, hydraulic accessories compartment, ceiling of the forward baggage compartment, tail cone, main gear well, air-conditioning compartment, left-hand and right-hand wing trailing edge, cabin forward of the aft pressure dome, vertical stabilizer, and at the cargo door. The cargo door jack outlet is applicable only for freighter configuration. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

   D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

   E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, in the aft attendant station, in the forward galley, and in the aft galley. The forward galley is not applicable for the freighter configuration. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications..

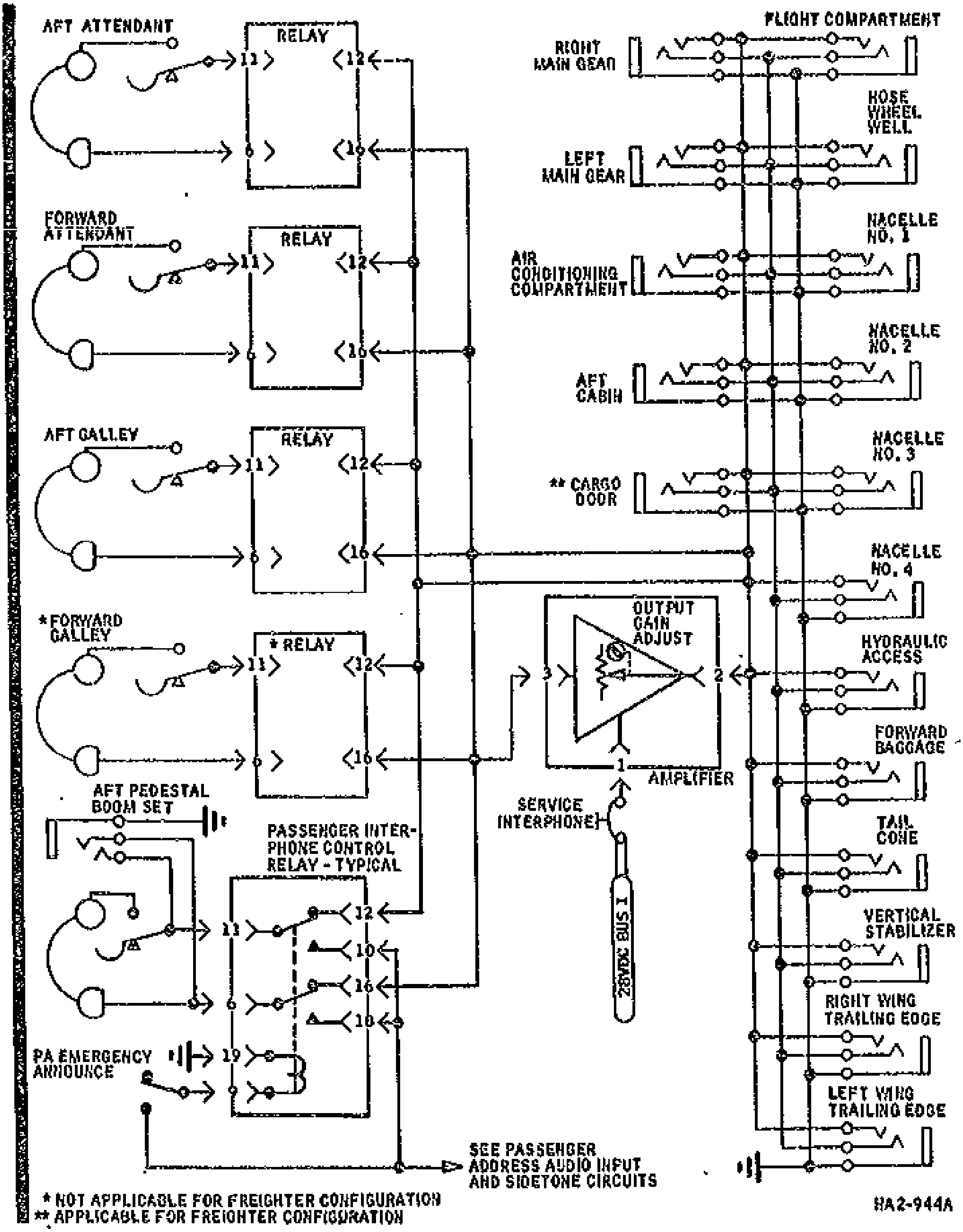
G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring and mute the flight compartment loudspeakers.

H. The flight compartment control switches used with the interphone system are the passenger address/interphone transfer switch and the mechanics call switch. The passenger address/interphone transfer switch is installed in the top panel of the electrical power center. When the switch is in the interphone transfer position, the handset remains on the interphone system, and passenger address announcements can not be made unless overridden by the passenger address emergency switch. The mechanics call switch is installed in the overhead switch panel and alerts the ground crew to establish communications at the nose wheel well. In addition, the switch ensures the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifer and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.



Service Interphone -- Simplified Schematic
Figure 1

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hangar.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communication between areas where service and maintenance operations are more frequently performed, and between the cabin attendant stations and the flight compartment. The interphone system consists of jack outlets, interphone jack switch, handsets, and cabin attendant panels. The interphone system utilizes the audio integrating system audio amplifier which integrates flight interphone audio and service interphone audio.

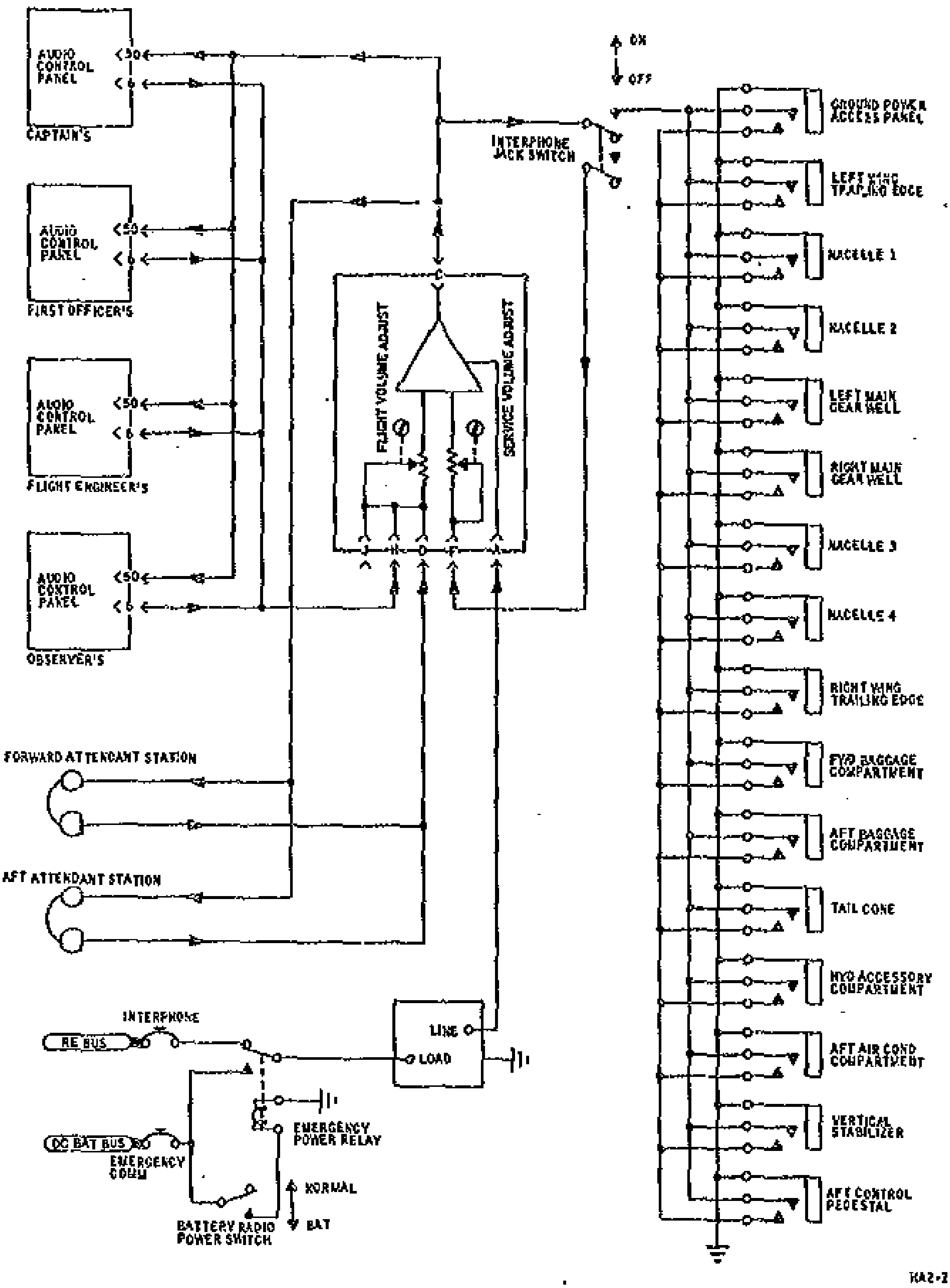
B. Standard interphone jack outlets are installed in the aft control pedestal and in the ground power access panel. Explosion proof jack outlets are installed in the ceiling area of the forward and aft baggage compartments, aft air conditioning compartment, left and right wing trailing edge, each main gear well, each engine nacelle accessible from outside the nacelle, tail cone, accessory compartment, and in the vertical stabilizer just below the isolation band. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

C. The interphone jack switch is installed in the flight compartment on the top panel of the radio jack. The switch is placed in the off position to isolate the interphone jack outlets from the audio integrating amplifier.

D. A handset is installed in each cabin attendant panel. Each handset contains an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio integrating amplifier output circuit through the handset hanger switch when the handset is removed from the hanger. The microphone is connected to the audio integrating amplifier flight input circuit through the push-to-talk switch.

E. The cabin attendant panels are installed in the forward and aft attendant stations. In conjunction with the interphone system, each panel contains a handset hanger and switch, and a handset jack outlet. Removal of the handset from the hanger actuates the hanger switch which connects the handset receiver to the audio integrating amplifier output circuit. The handset jack outlet is a standard jack outlet and the wiring is identical to the interphone jack outlets.

F. The audio integrating amplifier provides the necessary audio amplification for flight and service interphone communication. The amplifier contains a flight volume control, service volume control, and audio amplifier. The inputs to the amplifier are the flight crew microphone inputs, cabin handset microphone inputs, and the interphone jack outlet inputs. The flight crew and cabin handset microphone inputs are connected to the flight volume control and the interphone jack outlet input is connected to the service volume control. The flight and service volume controls are screwdriver adjustments accessible on the top of the amplifier. The amplifier integrates flight and service interphone audio and the output is applied to the



Interphone -- Simplified Schematic
Figure 1

audio control panels, cabin handset receivers, and the interphone jack outlets. Normal input power is supplied by the left emergency bus. Emergency power is supplied by the battery bus when the battery power switch is placed in the battery position. The amplifier is housed in a 4 1/2 by 1 11/16 by 5 1/8 inch box which is attached to a mounting plate by two snap lock fasteners. The audio integrating amplifier is installed in the inboard radio rack on shelf 6.

2. Operation

A. For handset operation, the handset is removed from the hanger and the handset microphone control switch is pressed. Microphone audio is applied to the audio integrating amplifier flight audio amplifier input and amplified. The amplified audio is applied to the audio control panels, handset receiver, and through the interphone jack switch to the interphone jack outlets.

B. For handset or boomset operation from the interphone jack outlets, the interphone jack switch is placed in the on position and the microphone control switch is pressed. Micrphone audio is applied to the audio integrating amplifier service audio amplifier input and amplified. The amplified audio is applied to the audio control panels, handset receivers, and through the interphone jack switch to the interphone jack outlets.

3. To Operate Interphone

A. To operate interphone from handset stations:

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press microphone control switch.

B. To operate interphone from interphone jack outlets:

(1) Energize electrical busses.

(2) Place interphone jack switch in on position.

(3) Insert handset or boomset jack into interphone jack outlet.

(4) Press microphone control switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for flight and maintenance communications. The amplifier is of modular construction and consists of a chassis with a rear mounted connector, front panel, dust cover, and 2 isolation amplifier modules. Each module contains a 2 stage audio amplifier and a preset volume control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by the 28-vdc left emergency bus.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the hydraulic accessories compartment, in the ceiling of the forward baggage compartment, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, in the cabin forward of the aft pressure dome, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring and mute the flight compartment loudspeakers.

H. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

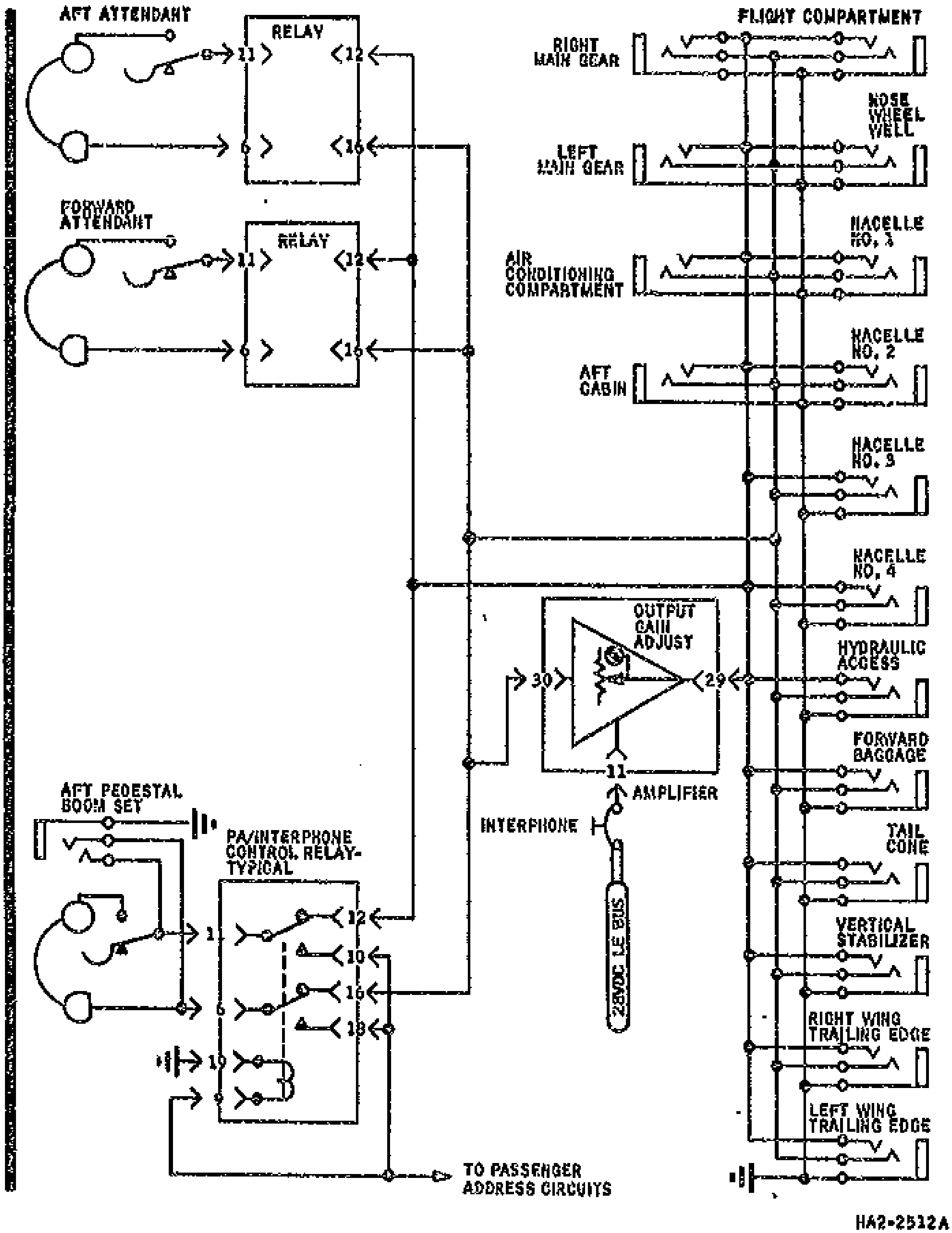
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed



Service Interphone -- Simplified Schematic
Figure 1

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hangar.

(3) Press push to talk switch.

INTERPHONE--DESCRIPTION AND OPERATION

1. General

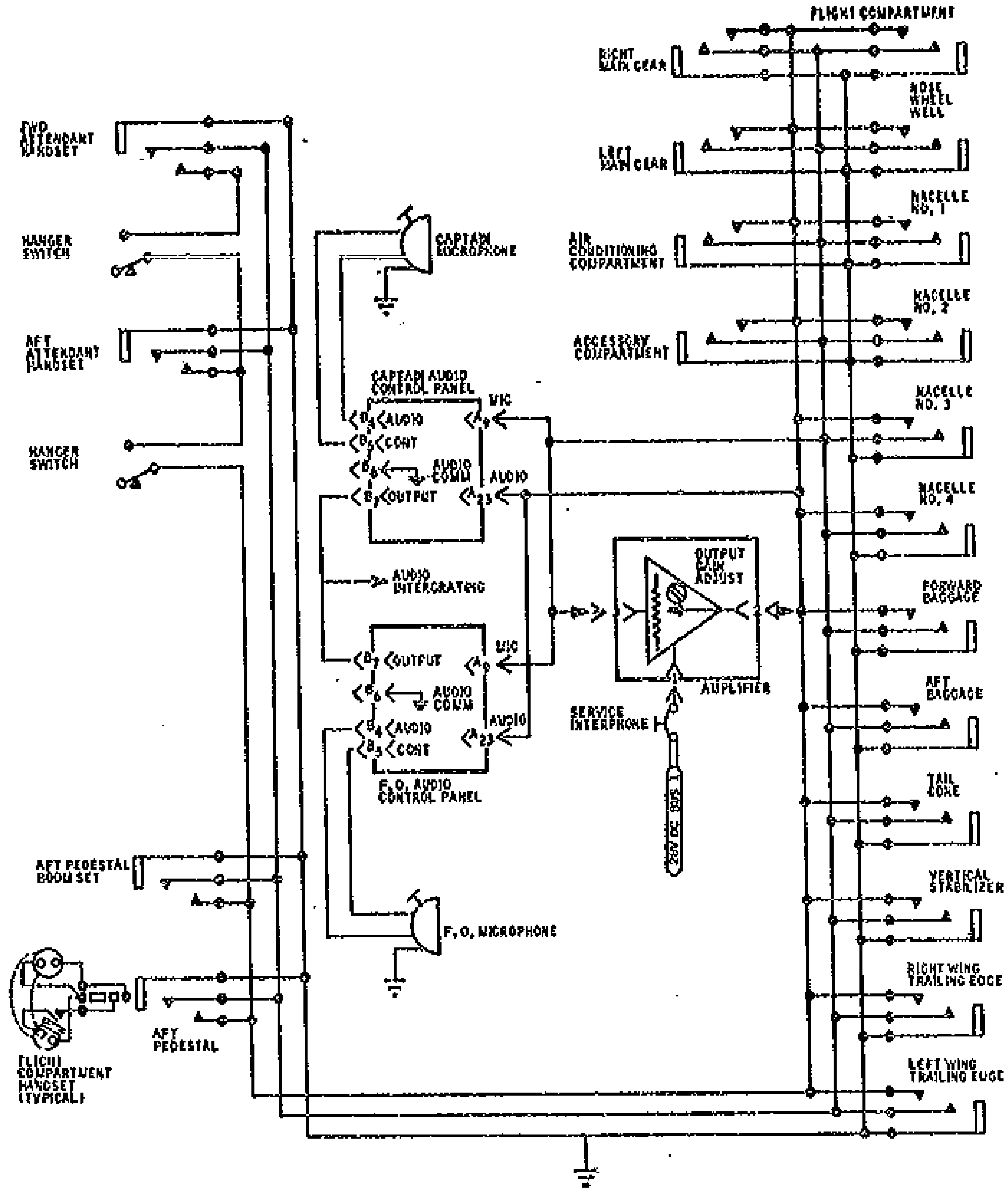
A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, handsets, cabin attendant panels, and flight compartment control switches.

B. The interphone amplifier is installed in the outboard radio rack on shelf 6, and provides the necessary audio amplification for service and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and to the handsets. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the aft baggage compartment, in the forward baggage compartment, in the tail cone, in each main gear wheel well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, in the accessory compartment, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of an additional boomset or handset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The cabin attendants handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

E. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station, for use with the interphone system. Each panel contains a handset hanger and switch, pilot and attendant call switches, and a reset switch. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. A passenger address microphone is provided at each cabin attendants panel. A music on/off volume control switch is located on the forward cabin attendants panel.



Interphone - Simplified Schematic
Figure 1

The flight compartment handset is located on the aft pedestal and it utilizes the interphone jack outlet mounted on the aft pedestal. The pilots audio control panels are installed in the left and right section of the aft pedestal.

F. The flight compartment control switches used to connect the service interphone system to the audio integrating signal wiring are located on the pilots audio control panels. When the interphoné audio selector switch is put in the UP position, and the service microphone switch is depressed, the service interphone signal wiring is connected to the audio integrating circuitry. The pilots audio control panel each have a separate noise line filter and a separate circuit breaker.

2. Operation

A. For handset or boomset operation from jack outlets, a handset jack or a boomset jack is inserted into a jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For cabin attendant handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To operate interphone from jack outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To operate interphone from handset stations.

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

C. To operate interphone from pilots station.

(1) Energize electrical buses.

(2) Place switches on audio control panel to positions indicated.

Control	Position
Interphone selector switch	Interphone (UP)
Microphone selector switch (service)	Depressed

(3) Employ microphone and press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

   A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches. (See Figure 1.)

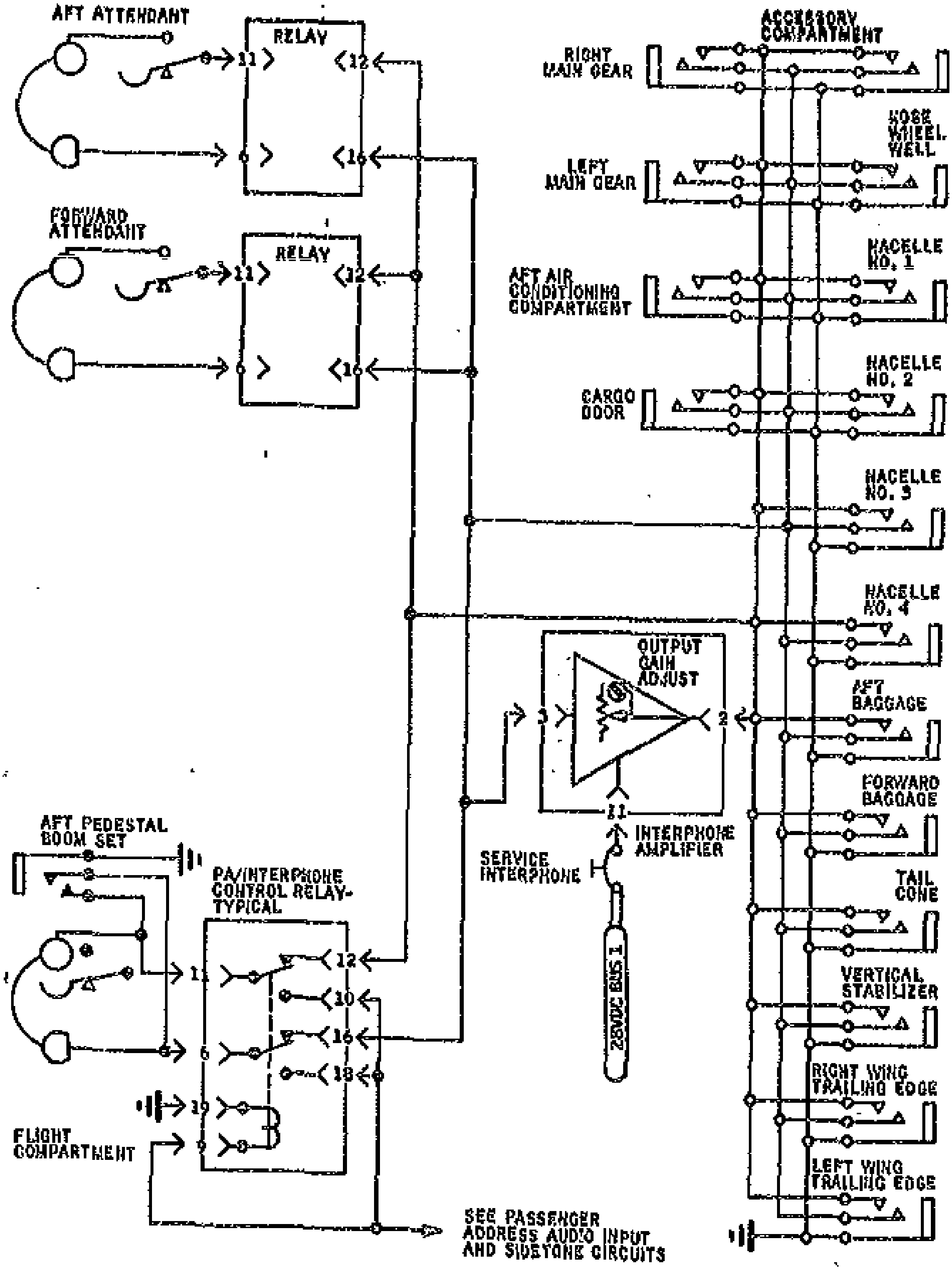
   B. The interphone amplifier is installed in the radio rack on shelf 7 and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

   C. Interphone jack outlets are installed at locations throughout the aircraft where intercommunications are required to facilitate service and maintenance operations. Each jack outlet permits establishing simultaneous communication with all interphone-stations in the system. Jack outlets are wired so that connections are as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

   D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

   E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected directly to the audio signal wiring and the microphone is connected to the audio signal wiring by the push-to-talk switch.

   F. Cabin attendant panels are installed in the forward attendant station and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.



Service Interphone -- Simplified Schematic
Figure 1

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to mute the flight compartment loudspeakers.

H. The flight compartment control relay and control switches used with the interphone system are the passenger address/interphone transfer relay, the pilot attendant call switch, and the mechanics call switch. The passenger address/interphone transfer relay is installed in the top panel of the electrical power center. When the pilot-to-attendant call switch is pressed, the interphone transfer relay momentarily energizes to open passenger address holding circuit, alert the attendant and ensure the headset is on the interphone system. Passenger address announcements cannot be made unless the passenger address announce switch is pressed. The mechanic call switch is installed in the overhead switch panel and alerts the ground crew to establish communication with the flight compartment. In addition the switch ensures the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push to-talk-switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, hanger and switch, and flight compartment control switches. (See Figure 1.)

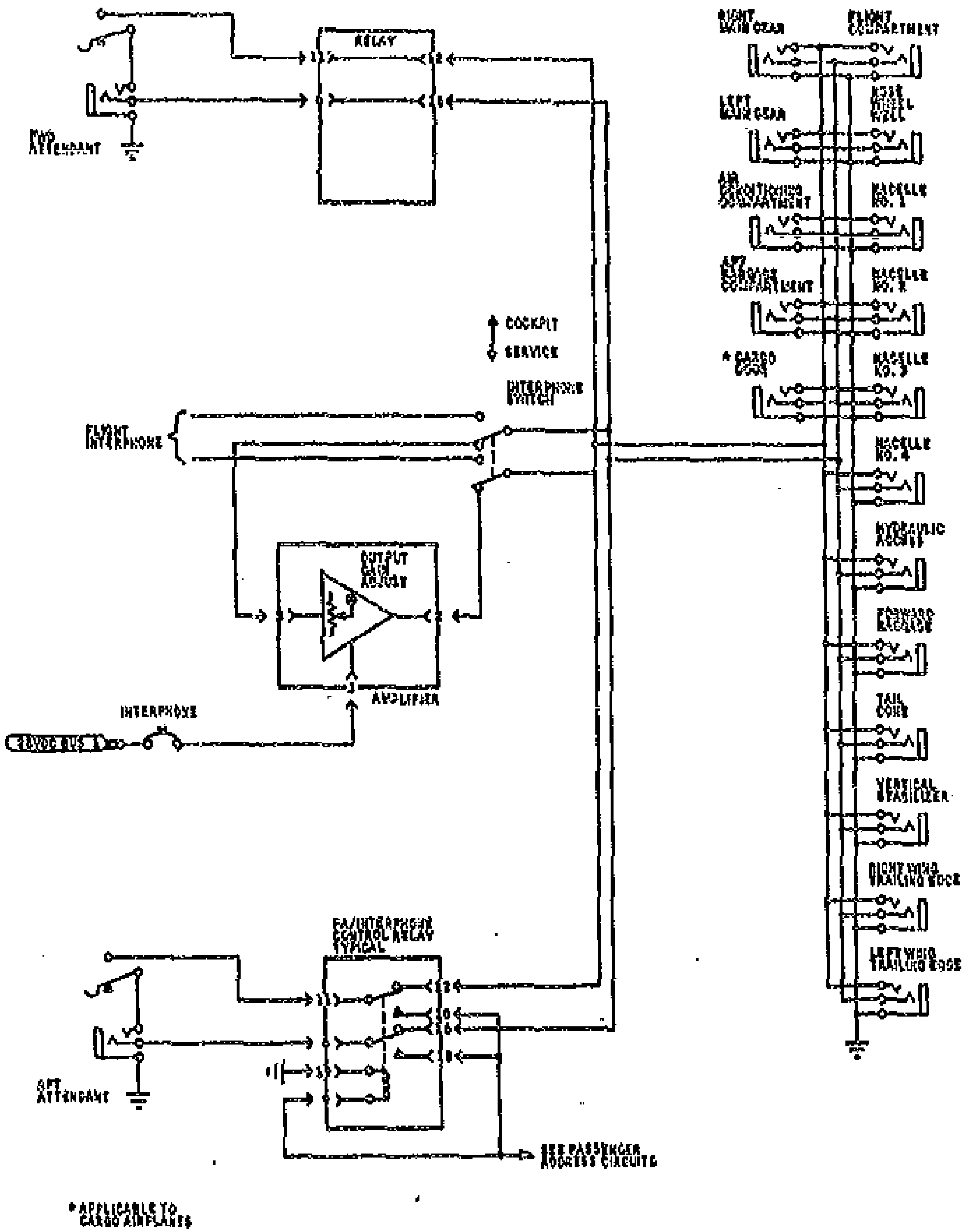
B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for service and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handset by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the hydraulic accessories compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, and the vertical stabilizer. An additional jack outlet is installed on cargo airplanes near the cargo door. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to



Service Interphone -- Simplified Schematic
Figure 1

connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment interphone switch, located on the overhead switch panel, is used to parallel and isolate the service and flight interphone systems. The two position switch has a service and cockpit position.

H. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place interphone switch, located on the overhead switch panel, to service position,

(3) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

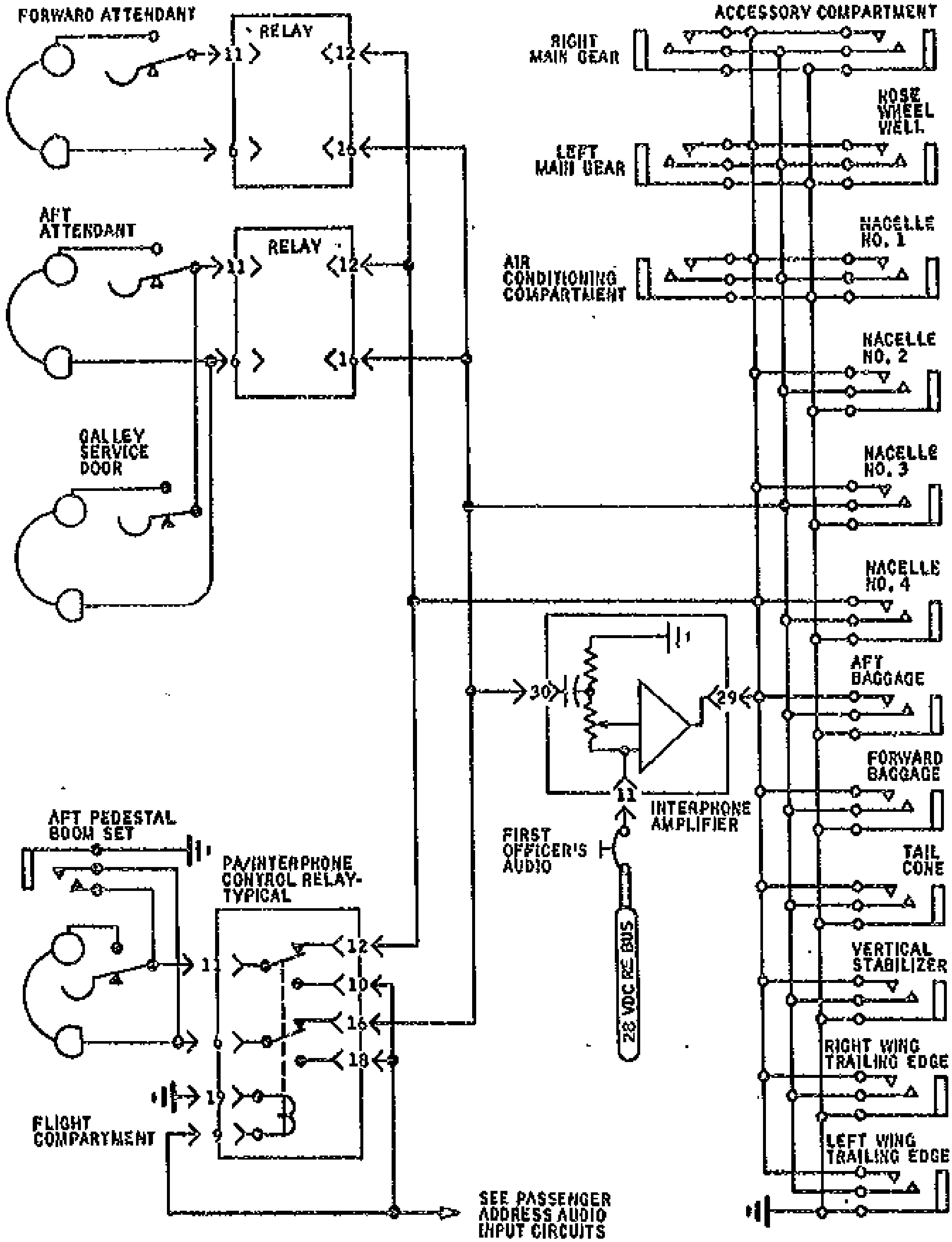
1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 3, and provides the necessary audio amplification for interphone and audio integrating systems. The amplifier is of modular construction and consists of a chassis with a rear mounted connector, front panel, dust cover, 2 interphone amplifier modules, and 2 speaker amplifier modules. One interphone amplifier module operates with the interphone system while the remaining amplifier modules operate in conjunction with the audio integrating system. The amplifier used with the interphone system is a 2 stage audio amplifier with a preset volume control mounted externally to the module, in the amplifier chassis. The interphone amplifier is connected directly to the jack outlets and to the handsets through the passenger address/interphone control relays. Electrical connections to the interphone amplifier are made through the electrical connector at the rear of the amplifier chassis. Electrical power is supplied by the 28-vdc right emergency bus.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the hydraulic accessory compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.



Service Interphone -- Simplified Schematic
Figure 1

E. A handset is installed in the flight compartment, at the galley service door and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendent station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring.

H. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier input circuits. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical busses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, and flight compartment control switches. (See figure 1.)

NOTE: On cargo airplanes, the interphone system is operational only at cabin attendants stations where equipment is installed.

B. The interphone amplifier is installed in the left hand console, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by the 28 vdc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the hydraulic accessories compartment, in the ceiling of the baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand wing trailing edge, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. On cargo airplanes, a jack outlet is installed near the cargo door. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, in the aft attendant station, in the forward galley, and the aft galley. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to station communications.

G. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

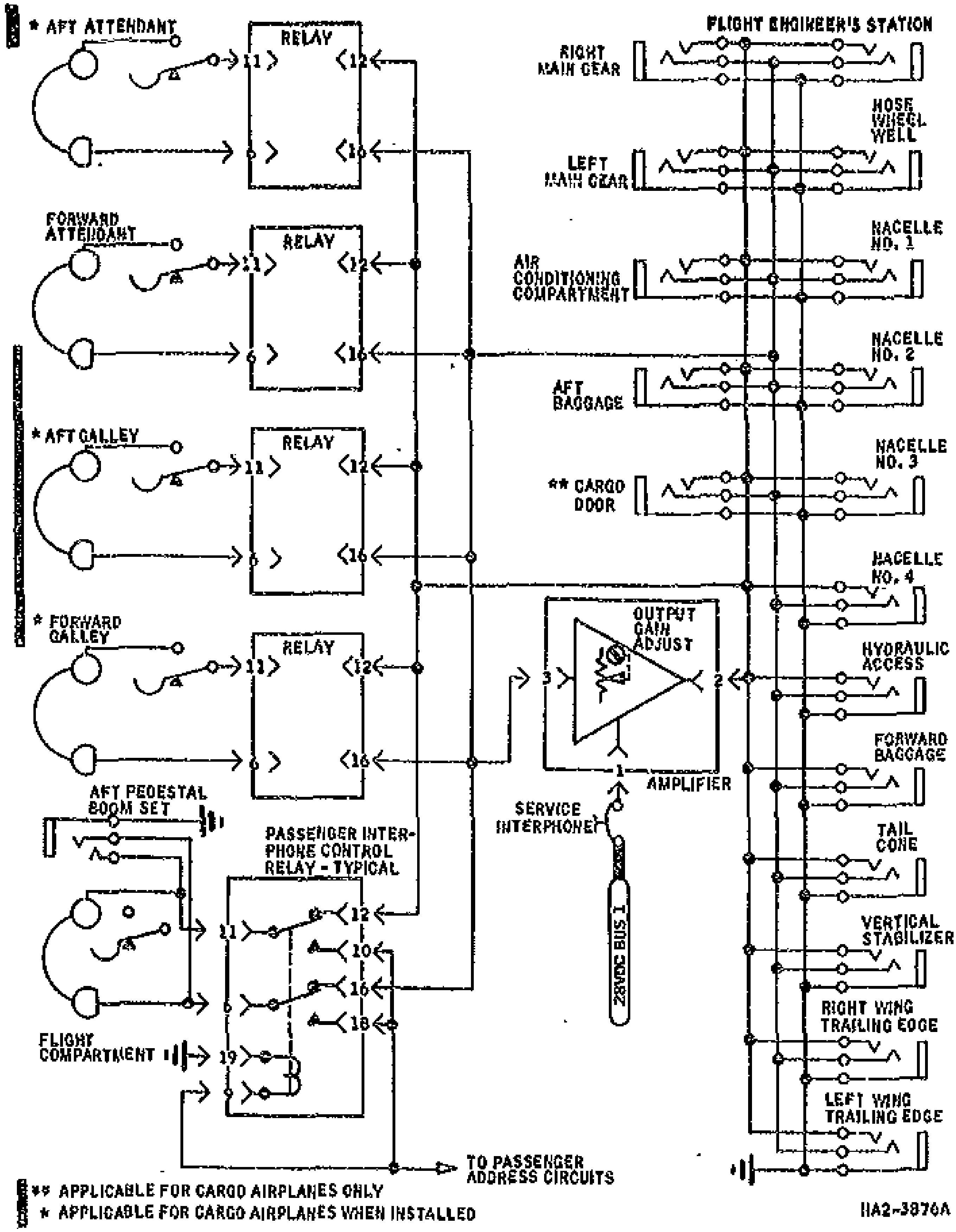
Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push to talk switch.



Service Interphone -- Simplified Schematic
Figure 1

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/ interphone control relays, handsets, cabin attendant panels, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for maintenance communications. The amplifier, a transistorized unit, consists of a chassis with a rear mounted connector, and a dust cover. Functionally the amplifier consists of 2 cascaded voltage amplifier stages with a 2 stage cathode follower output. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through the electrical connector at the rear of the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in each engine nacelle, in the hydraulic accessories compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air conditioning compartment, in the left-hand and right-hand wing trailing edge, and in the vertical stabilizer. Wiring to the jack outlets is as follows: Tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the forward cabin ceiling; a relay is provided for each cabin handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacles mounted on the relay housing.

E. Handsets are installed in each cabin attendant panel. Each handset consists of an audio receiver, microphone and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendants' panels are located at the forward, aft, and mid cabin stations, except airplanes PH-DEA - PH-DEH which have wiring provisions for a mid cabin attendant panel. Each panel contains a handset hanger and switch and selective call switches. Removal of the handset operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is connected to the interphone system for station-to-station communication.

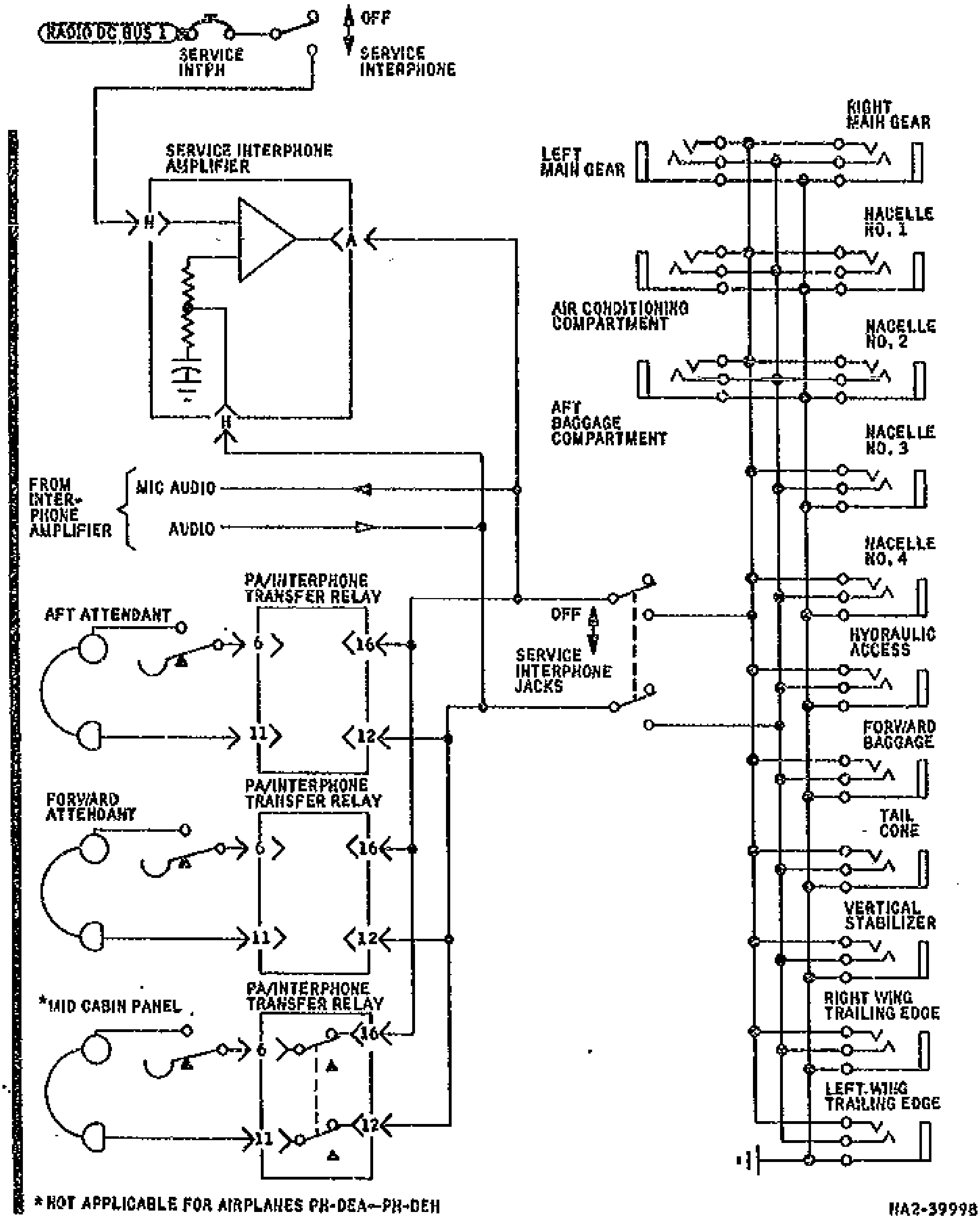
G. The flight compartment control switches, on the overhead switch panel, used with the interphone system are the service interphone control switch and the call switches for attendant and mechanic call. The service interphone control switch is used to turn the service interphone amplifier on and off, and energize circuits in the flight interphone amplifier. The flight compartment stations and the nose wheel well jack outlet are connected to the service interphone jack outlets and the attendant handsets, when the service interphone control switch is off. Also the service interphone jack outlets and attendant handsets are connected through the flight interphone amplifier to obtain necessary signal amplification. When the control switch is in the service interphone position, the jack outlets and the attendant stations are isolated from the flight interphone amplifier and signal amplification is obtained through the service interphone amplifier. The attendant and mechanic call switches alert attendant or ground crew to establish communication with the flight compartment.

H. The service interphone jack switch, in the radio rack, is used to disconnect the service interphone jack outlets from the interphone system when communication with these outlets is not required. The normal position for this switch when the airplane is not in a maintenance configuration is off.

2. Operation

A. System operation when the service interphone control switch is in the interphone position: For handset operation from service interphone jack outlets, a handset jack is inserted into a service interphone jack outlet and the push-to-talk switch is pressed. Microphone audio is applied through the service interphone jack switch to the service interphone amplifier. The amplifier audio output is applied to all service interphone jack outlets and attendant handsets.

B. System operation when the service interphone control switch is in the off position: For handset operation from service interphone jack outlets, a handset jack is inserted into a service interphone jack outlet and the push-to-talk switch is pressed. Microphone audio is applied through the service interphone jack switch to the service interphone input circuits of the flight interphone amplifier. The amplified audio output is applied to all service interphone jack outlets, attendant handsets, nose wheel well jack outlet, and to flight compartment headsets when the interphone audio selector switch on applicable audio control panel is on. Communication from the flight compartment to service interphone jack outlets is available when audio control panel interphone microphone selector switch is on and appropriate microphone is used.



Service Interphone -- Simplified Schematic
Figure 1

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets using Service Interphone Amplifier.

(1) Energize electrical buses.

(2) Place switches and controls in positions indicated.

Control	Position
Service interphone control switch	Service interphone
Service interphone jack switch	On
Handset jack	Jack inserted
Push-to-talk	Depressed

B. To Operate Interphone from Service Interphone Jack Outlets Using Flight Interphone Amplifier.

(1) Energize electrical buses.

(2) Place switches and controls in positions indicated.

Control	Position
Service Interphone control switch	Off
Service interphone jack outlet switch	On
Handset jack	Jack inserted
Push-to-talk switch	Depressed

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relay, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 6, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the accessory compartment, in the ceiling of the forward and aft baggage compartment, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge. at the cargo door, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of the boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relay is installed in the radio rack. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed at the aft pedestal in the flight compartment. The handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring, through the control relay, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring and mute the flight compartment loudspeakers.

H. The flight compartment control switches used with the interphone system are the audio control panel call switches and the mechanic call switch. The mechanic call switch is located on the overhead switch panel and alerts ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system. An interphone parallel/isolate switch is located in the radio rack. This switch will allow the service and flight interphone systems to be connected together.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

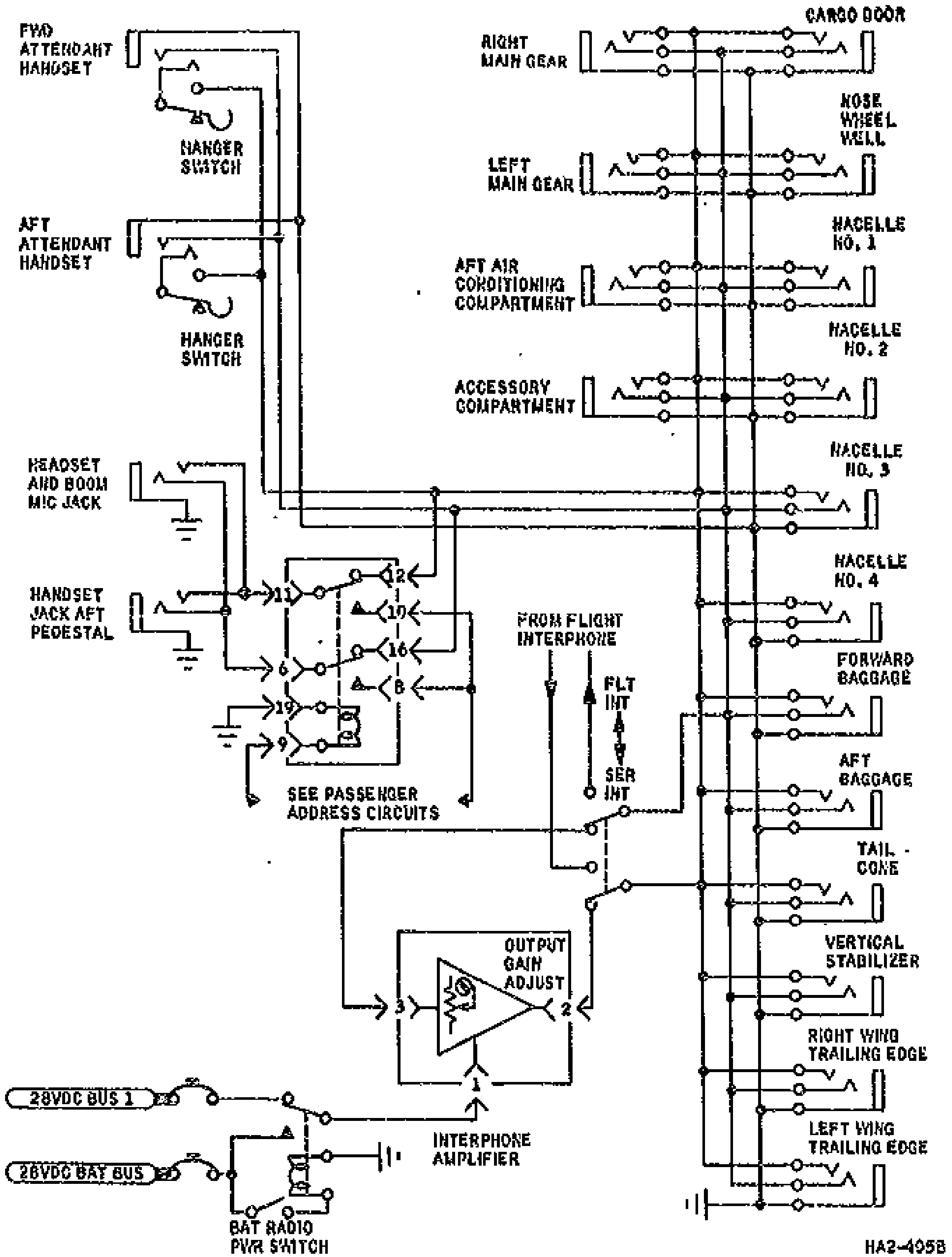
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place interphone switch to service position.

(3) Place switches and controls to positions indicated.



Service Interphone -- Simplified Schematic
Figure 1

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hangar.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the hydraulic accessories compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver, at each attendant panel, is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, in the aft attendant station, in the forward galley, and in the aft galley. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the

hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to mute the flight compartment loudspeakers.

H. The flight compartment control switches that function with the interphone system are the mechanics call switch and the attendant call switch. Both switches are installed in the overhead switch panel. The mechanic call switch is used to alert ground crew personnel to establish communication at the nose wheel well. The attendant call switch is used to alert attendants to establish communication with the flight compartment. A second function of these switches is to ensure the handset is connected to interphone system: This is accomplished by activating circuitry that opens the passenger address/interphone control relay holding circuit.

2. Operation

A. For handset or boomset operation from jack outlets a handset plug or a boomset plug is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier. Amplifier output is applied to all jack outlets and to all handset stations.

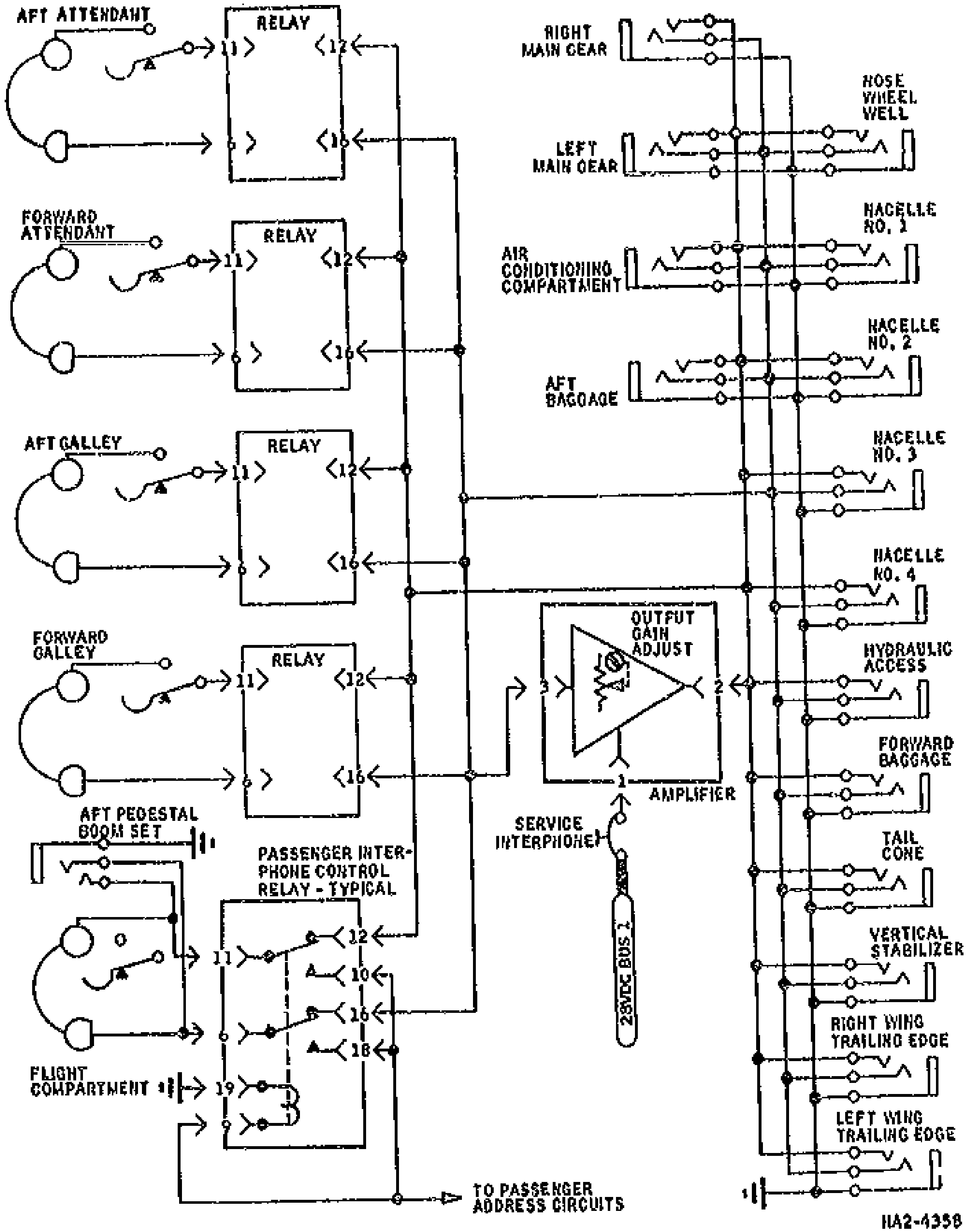
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset plug	Plug inserted
Push-to-talk switch	Depressed



Service Interphone -- Simplified Schematic
Figure 1

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communication between areas where service and maintenance operations are most frequently performed, and between the cabin attendant stations and the flight compartment. The interphone system consists of jack outlets, interphone amplifier, handsets and cabin attendant panels. Service interphone communication from flight crew stations is selectable through the flight compartment audio control panels and the flight engineer's audio selector switch.

B. Service interphone jack outlets are installed in the aft control pedestal, in the nose wheel well, in the ceiling area of the forward and aft baggage compartments, aft air conditioning compartment, left and right wing trailing edge, each main gear well, each engine nacelle, tail cone, accessory compartment and the vertical stabilizer just below the isolation band. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

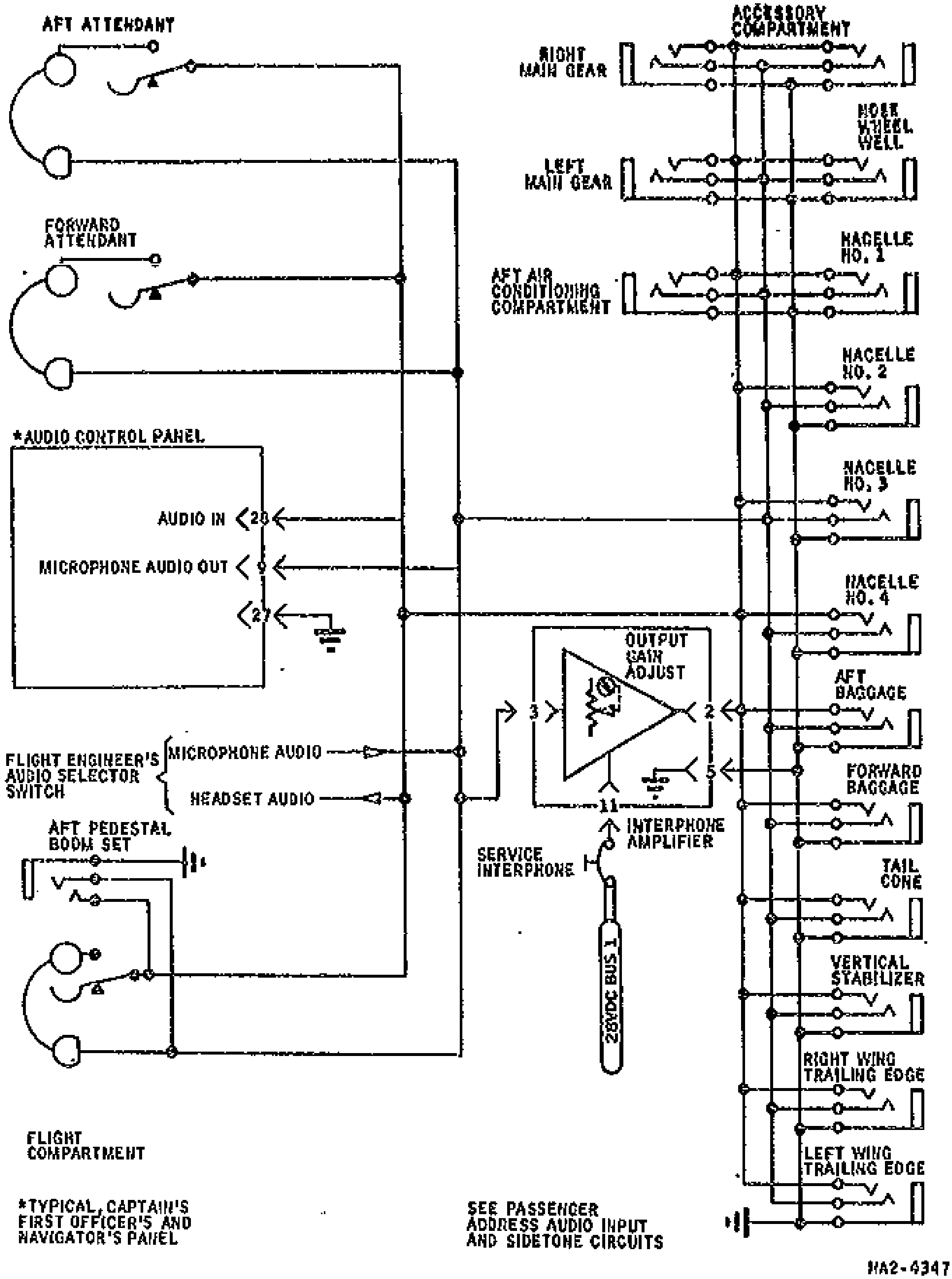
C. A handset is installed at the aft pedestal and in each cabin attendant panel. Each handset contains an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the interphone amplifier output circuit through the handset hanger switch when the handset is removed from the hanger. The microphone is connected to the interphone amplifier input circuit through the push-to-talk switch.

D. Cabin attendant panels are installed in the forward and aft attendant stations. In addition a cabin attendant panel is located at the galley service door on airplane JA8038. In conjunction with the interphone system, each panel contains a handset hanger and switch, and a handset jack outlet. Removal of the handset from the hanger actuates the hanger switch, which connects the handset receiver to the interphone amplifier output circuit. The handset jack outlet is a standard jack with wiring identical to the service interphone jack outlets.

E. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary amplification for service communication when the airplane is in flight or on the ground. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and handsets. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

2. Operation

A. For handset operation, the handset is removed from the hanger and the microphone control switch is pressed. Microphone audio is applied to the



Interphone -- Simplified Schematic
Figure 1

interphone amplifier input circuits. The audio output is applied to the audio control panels, handset receiver, and to the interphone jack outlets.

B. For handset or boomset operation from the interphone jack outlets, the interphone plug is inserted into the jack outlet and the microphone control switch is pressed. Microphone audio is applied to the amplifier input circuits. The audio output is applied to the audio control panels, handset receivers, and the interphone jack outlets.

C. For interphone operation from the flight crew station, the service interphone selector switches are placed in the service interphone position. Microphone audio is routed to the interphone amplifier input circuits. The audio output is routed to headsets of the interphone system and the selected headsets in the flight compartment.

3. To Operate Interphone

A. To operate interphone from handset stations:

(1) Energize electrical buses.

(2) Remove handset from Hanger.

(3) Press microphone control switch.

B. To operate interphone from interphone jack outlets:

(1) Energize electrical buses.

(2) Insert Handset or boomset plug into interphone jack outlet.

(3) Press microphone control switch.

C. To operate interphone from flight crew stations:

(1) Energize electrical buses.

(2) At audio control panels or engineer's station, place selector switches to service interphone.

(3) Using microphone at selected station, press microphone control switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

   A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches. (See Figure 1.)

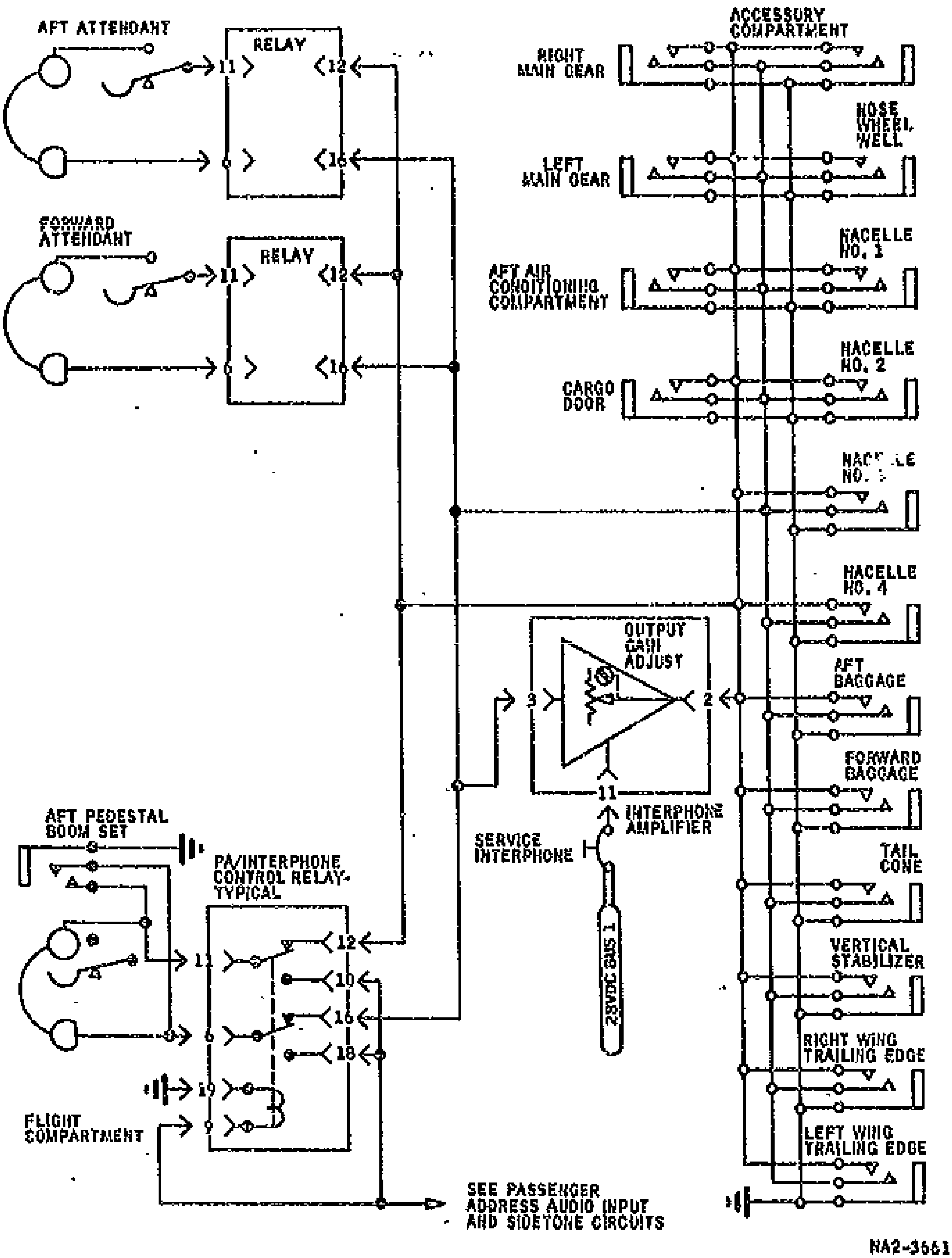
   B. The interphone amplifier is installed in the radio rack and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

   C. Interphone jack outlets are installed at locations throughout the aircraft where intercommunications are required to facilitate service and maintenance operations. Each jack outlet permits establishing simultaneous communication with all interphone-stations in the system. Jack outlets are wired so that connections are as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

   D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

   E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected directly to the audio signal wiring and the microphone is connected to the audio signal wiring by the push-to-talk switch.

   F. Cabin attendant panels are installed in the forward attendant station and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.



Service Interphone -- Simplified Schematic
Figure 1

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to mute the flight compartment loudspeakers.

H. The flight compartment control relay and control switches used with the interphone system are the passenger address/interphone transfer relay, the pilot attendant call switch, and the mechanics call switch. The passenger address/interphone transfer relay is installed in the top panel of the electrical power center. When the pilot-to-attendant call switch is pressed, the interphone transfer relay momentarily energizes to open passenger address holding circuit, alert the attendant and ensure the headset is on the interphone system. Passenger address announcements cannot be made unless the passenger address announce switch is pressed. The mechanic call switch is installed in the overhead switch panel and alerts the ground crew to establish communication with the flight compartment. In addition the switch ensures the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/ interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the accessory compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. On cargo airplanes, a jack outlet is installed near the cargo door. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver, at each attendant panel, is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to

connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel, and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to mute the flight compartment loudspeakers.

H. The flight compartment control switches that function with the interphone system are the mechanics call switch and the attendant call switch. Both switches are installed in the overhead switch panel. The mechanic call switch is used to alert ground crew personnel to establish communication at the nose wheel well. The attendant call switch is used to alert attendants to establish communication with the flight compartment. A second function of these switches is to ensure the handset is connected to interphone system: This is accomplished by activating circuitry that opens the passenger address/interphone control relay holding circuit.

2. Operation

A. For handset or boomset operation from jack outlets a handset plug or a boomset plug is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier. Amplifier output is applied to all jack outlets and to all handset stations.

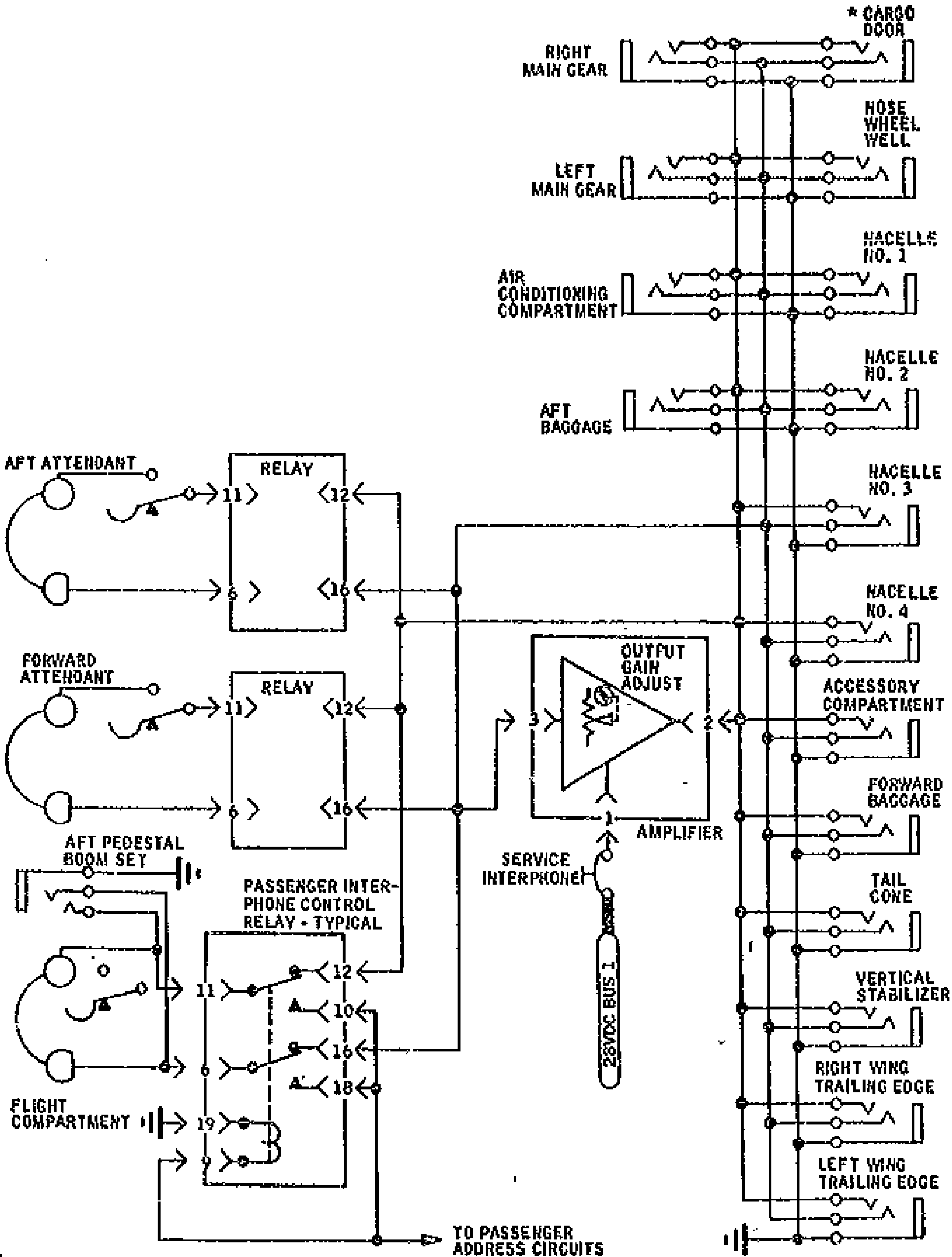
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset plug	Plug inserted
Push-to-talk switch	Depressed



*APPLICABLE FOR CARGO AIRPLANES ONLY

HA2-4916 A

Service Interphone -- Simplified Schematic
Figure 1

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relay, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 6, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the accessory compartment, in the ceiling of the forward and aft baggage compartment, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, at the cargo door, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of the boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed at the aft pedestal in the flight compartment. The handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring, through the control relay, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the

handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring and mute the flight compartment loudspeakers.

H. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system. An interphone parallel/isolate switch is located on the radio rack. This switch will allow the service and flight interphone systems to be connected together.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

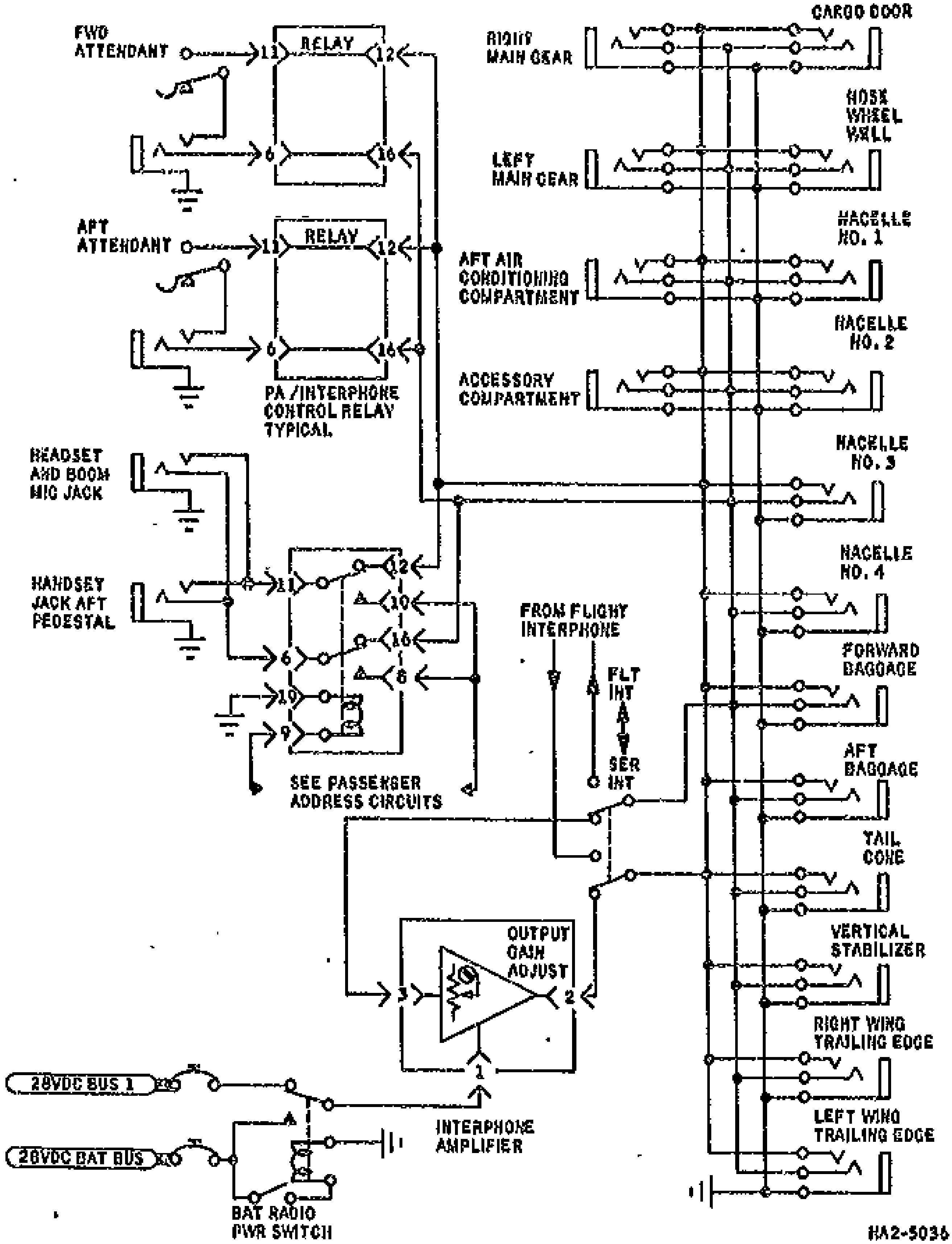
A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place interphone switch to service position.

(3) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed



Service Interphone -- Simplified Schematic
Figure 1

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hangar.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

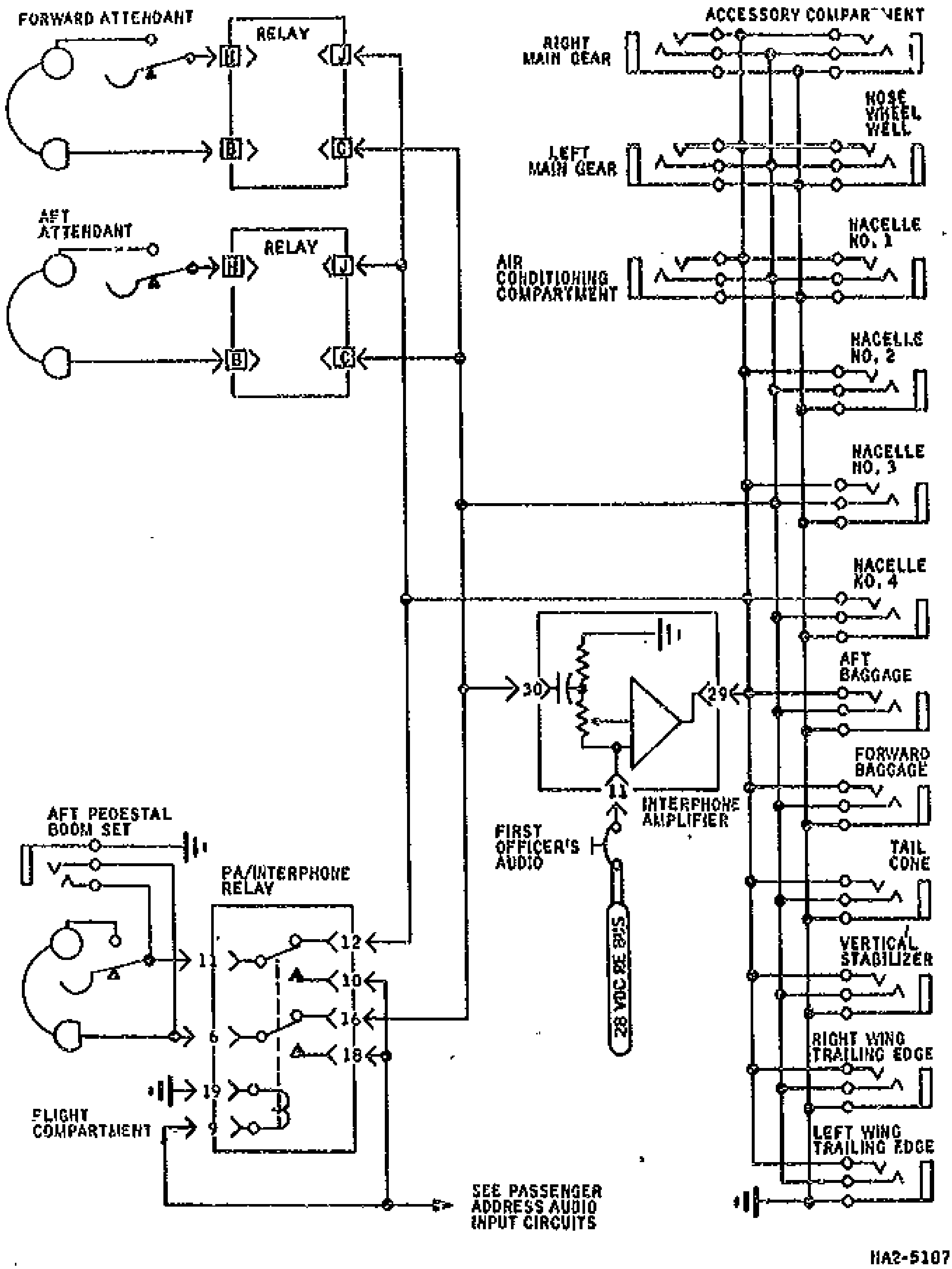
A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack, and provides the necessary audio amplification for interphone and audio integrating systems. The amplifier is of modular construction and consists of a chassis with a rear mounted connector, front panel, dust cover, two interphone amplifier modules, and two speaker amplifier modules. One interphone amplifier module operates with the interphone system while the remaining amplifier modules operate in conjunction with the audio integrating system. The amplifier used with the interphone system is a two-stage audio amplifier with a preset volume control mounted externally to the module in the amplifier chassis. The interphone amplifier is connected directly to the jack outlets and to the handsets through the passenger address/interphone control relays. Electrical connections to the interphone amplifier are made through the electrical connector at the rear of the amplifier chassis. Electrical power is supplied by the 28-vdc right emergency bus.

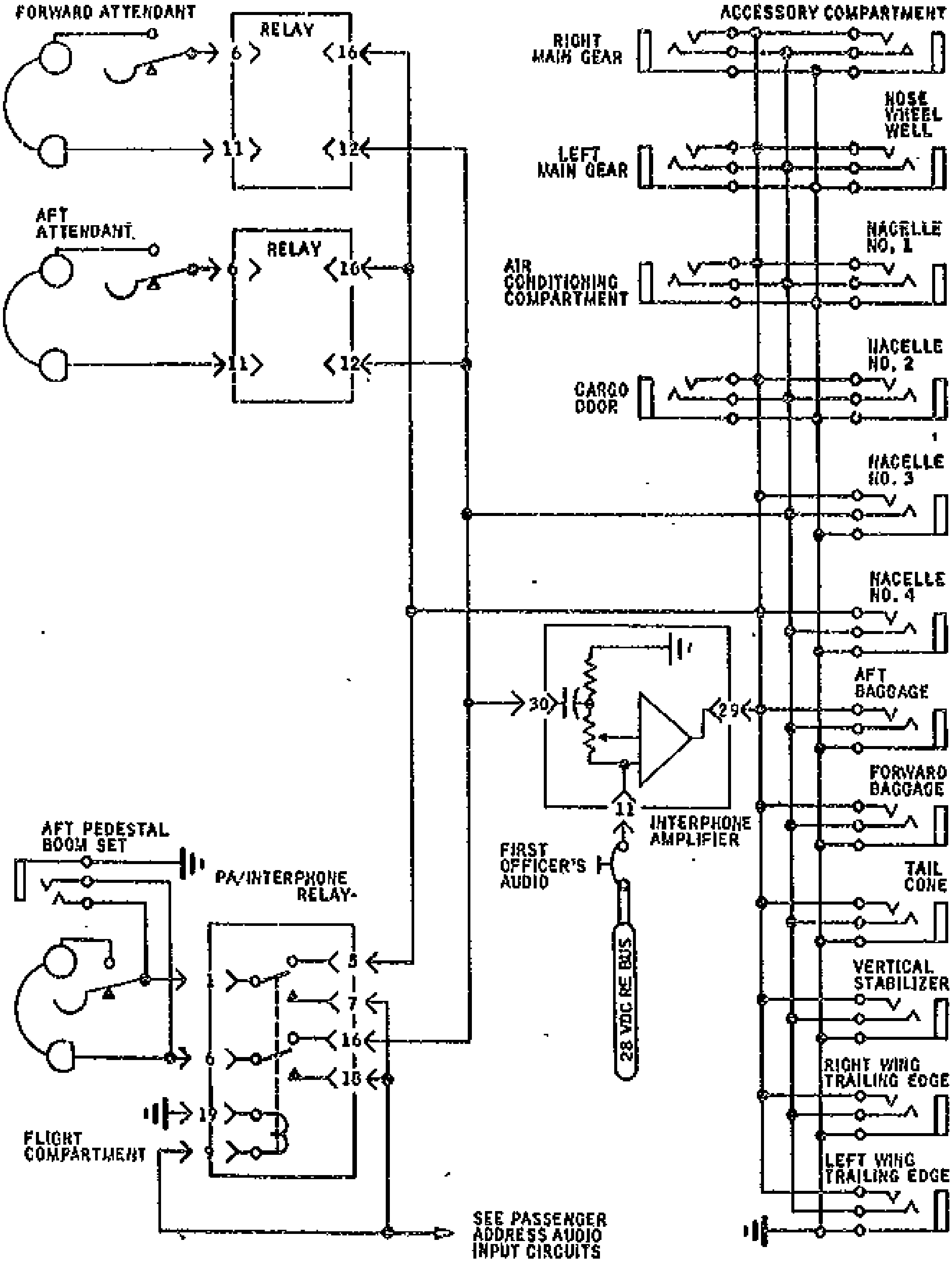
C. Interphone jack outlets are installed in the flight compartment, in the nosewheel well, in each engine nacelle, in the hydraulic accessory compartment, in the ceiling of the forward and aft baggage compartments, in the tailcone, in each main gear well, in the air conditioning compartment, in the left-hand and right-hand wing trailing edge, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft-pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. On cargo airplanes a jack outlet is installed near the cargo door. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack, forward cabin attendant panel, and aft cabin ceiling, and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

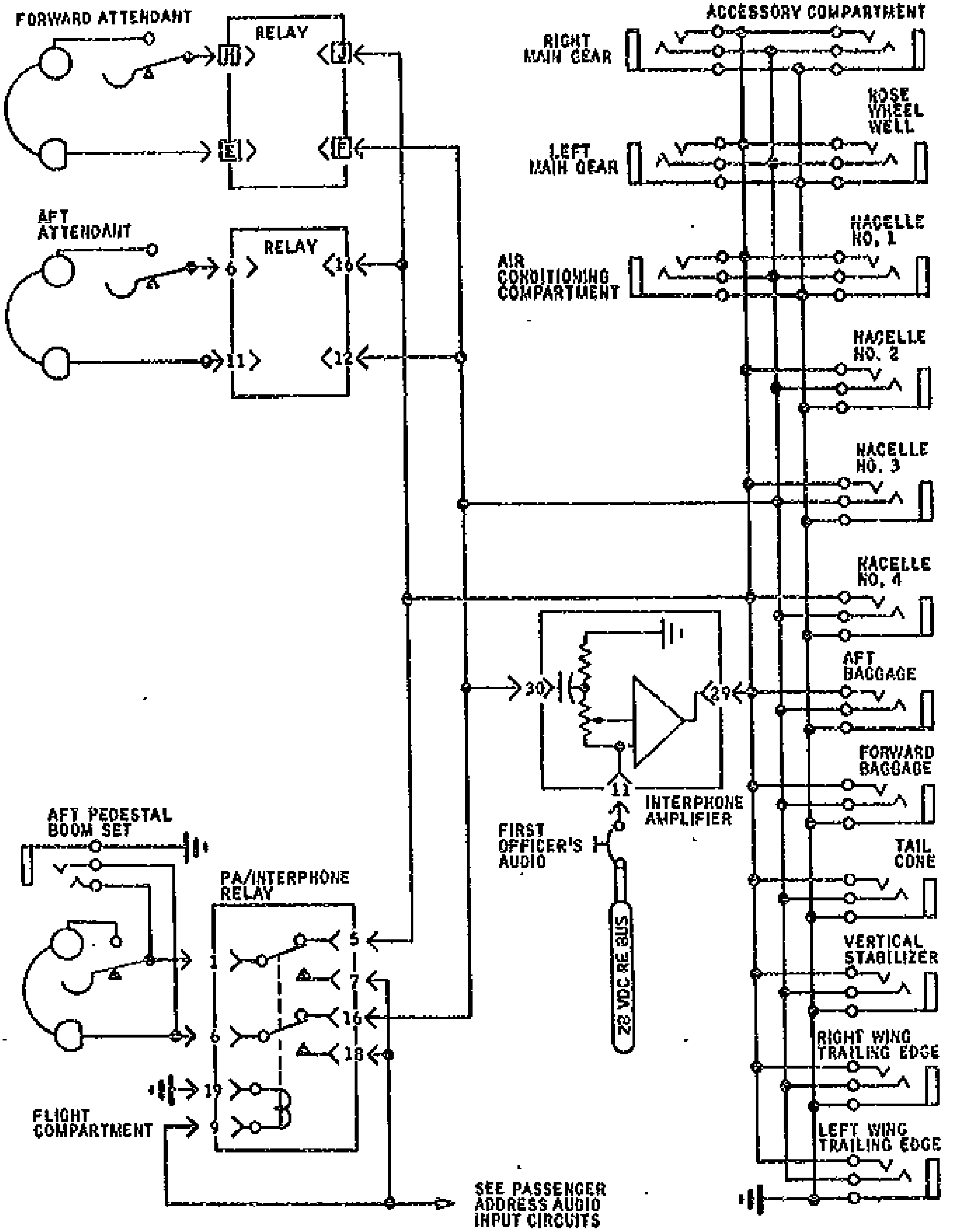
E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.



Service Interphone -- Simplified Schematic
(Airplanes 801-811)



Service Interphone -- Simplified Schematic
(Airplanes 812, 813)



Service Interphone -- Simplified Schematic
(Airplanes 814-822)
Figure 1 (Sheet 3)

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring.

H. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets, a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier input circuits. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to position indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches. (See Figure 1.)

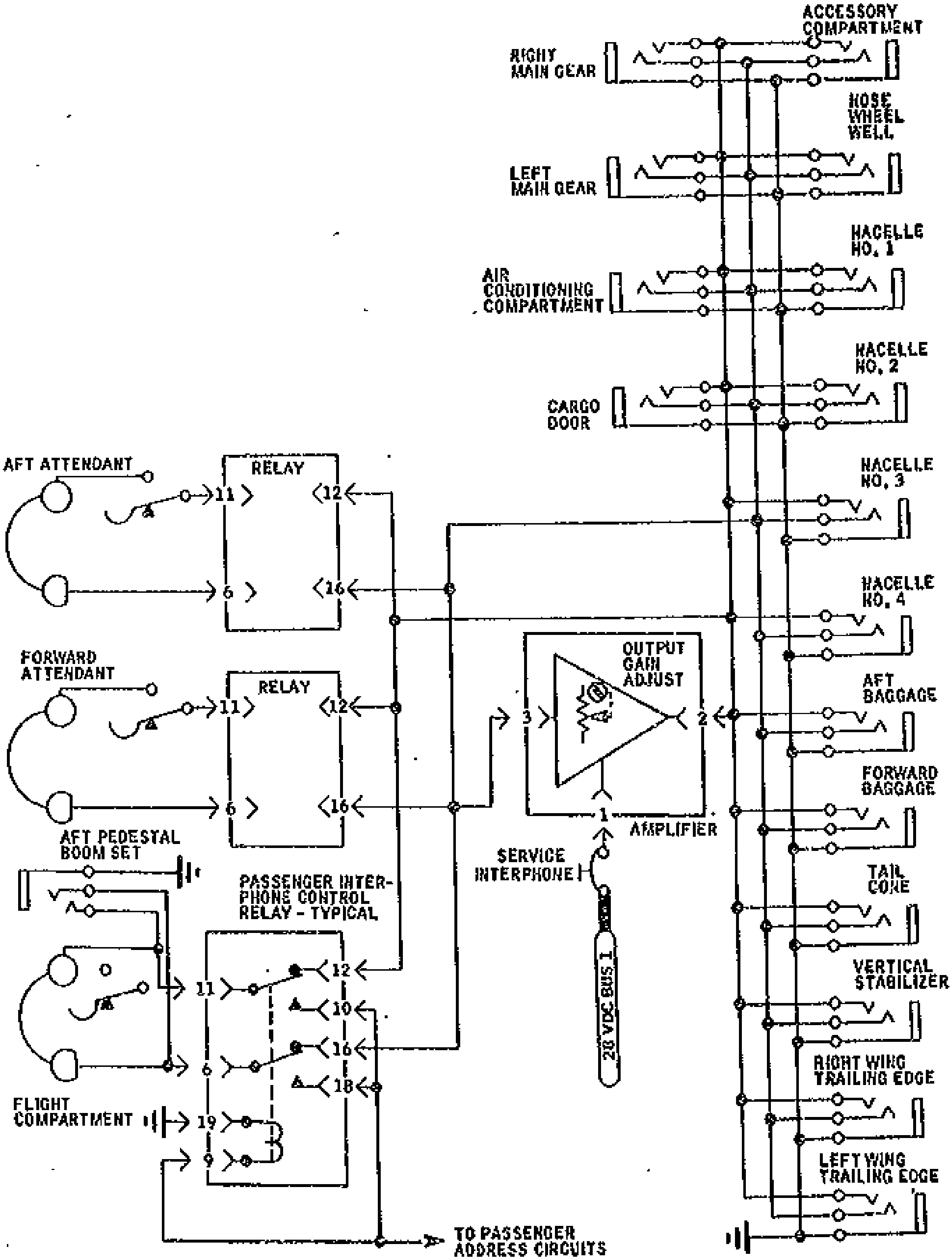
B. The interphone amplifier is installed in the radio rack and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed at locations throughout the aircraft where intercommunications are required to facilitate service and maintenance operations. Each jack outlet permits establishing simultaneous communication with all interphone-stations in the system. Jack outlets are wired so that connections are as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected directly to the audio signal wiring and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.



Service Interphone -- Simplified Schematic
Figure 1

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to mute the flight compartment loudspeakers.

H. The flight compartment control relay and control switches used with the interphone system are the passenger address/interphone transfer relay, the pilot attendant call switch, and the mechanics call switch. The passenger address/interphone transfer relay is installed in the top panel of the electrical power center. When the pilot-to-attendant call switch is pressed, the interphone transfer relay momentarily energizes to open passenger address holding circuit, alert the attendant and ensure the headset is on the interphone system. The mechanic call switch is installed in the overhead switch panel and alerts the ground crew to establish communication with the flight compartment. In addition the switch ensures the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed. The interphone system consists of an audio amplifier, interphone jack outlets, handsets, and a flight compartment mechanic call switch. (See Figure 1.)

B. The interphone amplifier is installed in the radio rack and provides the necessary audio amplification for maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed at locations throughout the aircraft where intercommunications are required to facilitate service and maintenance operations. Each jack outlet permits establishing simultaneous communication with all interphone-stations in the system. Jack outlets are wired so that connections are as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The flight compartment interphone control is the mechanic call switch, located on the overhead switch panel. Pressing the mechanic call switch alerts ground personnel to establish communications with the flight compartment.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

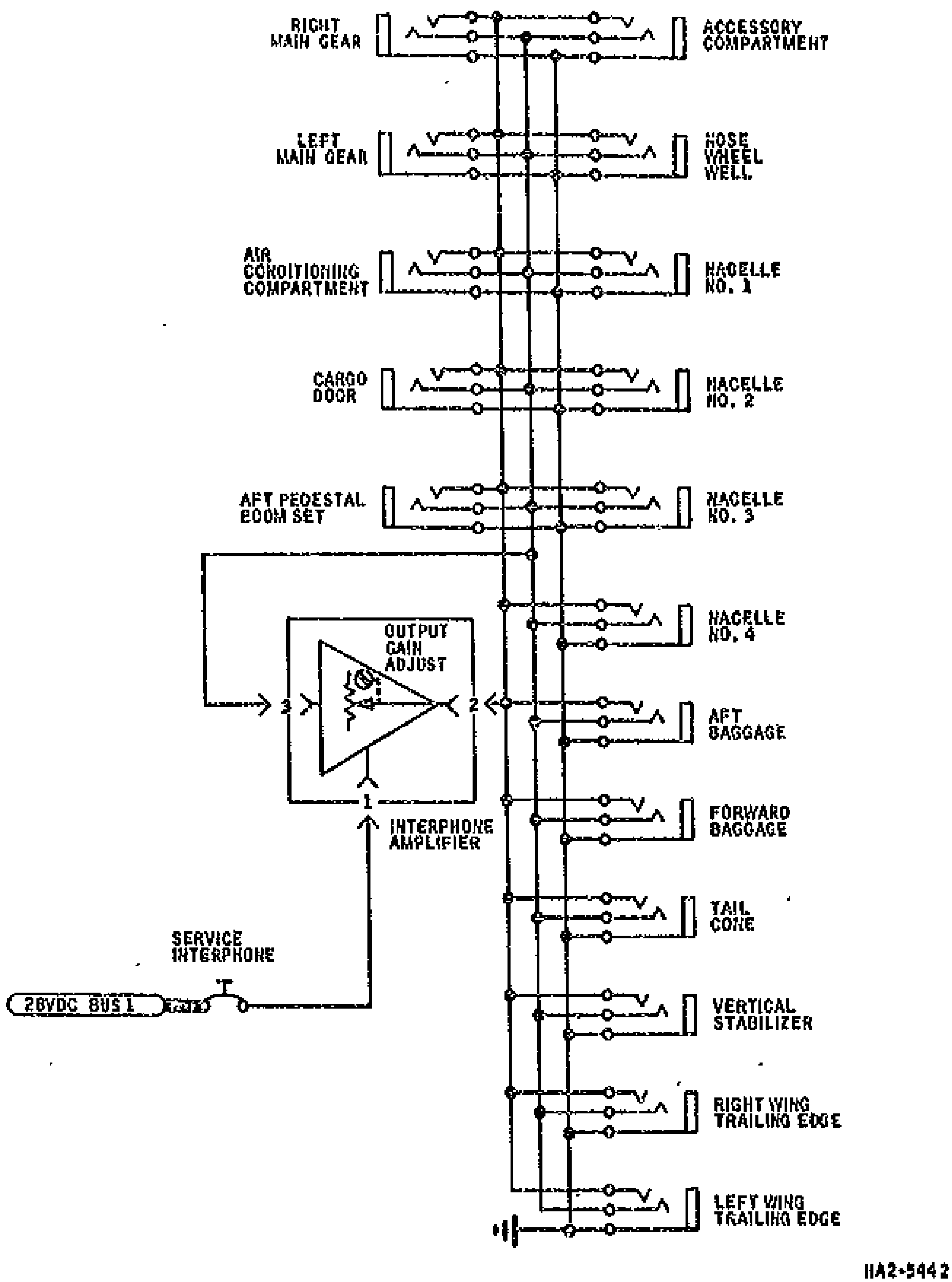
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed



Service Interphone -- Simplified Schematic
Figure 1

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communication between areas where service and maintenance operations are most frequently performed. The interphone system consists of jack outlets, interphone amplifier, and handsets. Service interphone communication from flight crew stations is selectable through the flight compartment audio control panels and the flight engineer's audio selector switch.

B. Service interphone jack outlets are installed at the cargo door, in the nose wheel well, in the ceiling area of the forward and aft baggage compartments, aft air conditioning compartment, left and right wing trailing edge, each main gear well, each engine nacelle, tail cone, accessory compartment and the vertical stabilizer just below the isolation band. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

C. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary amplification for service communication when the airplane is in flight or on the ground. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

2. Operation

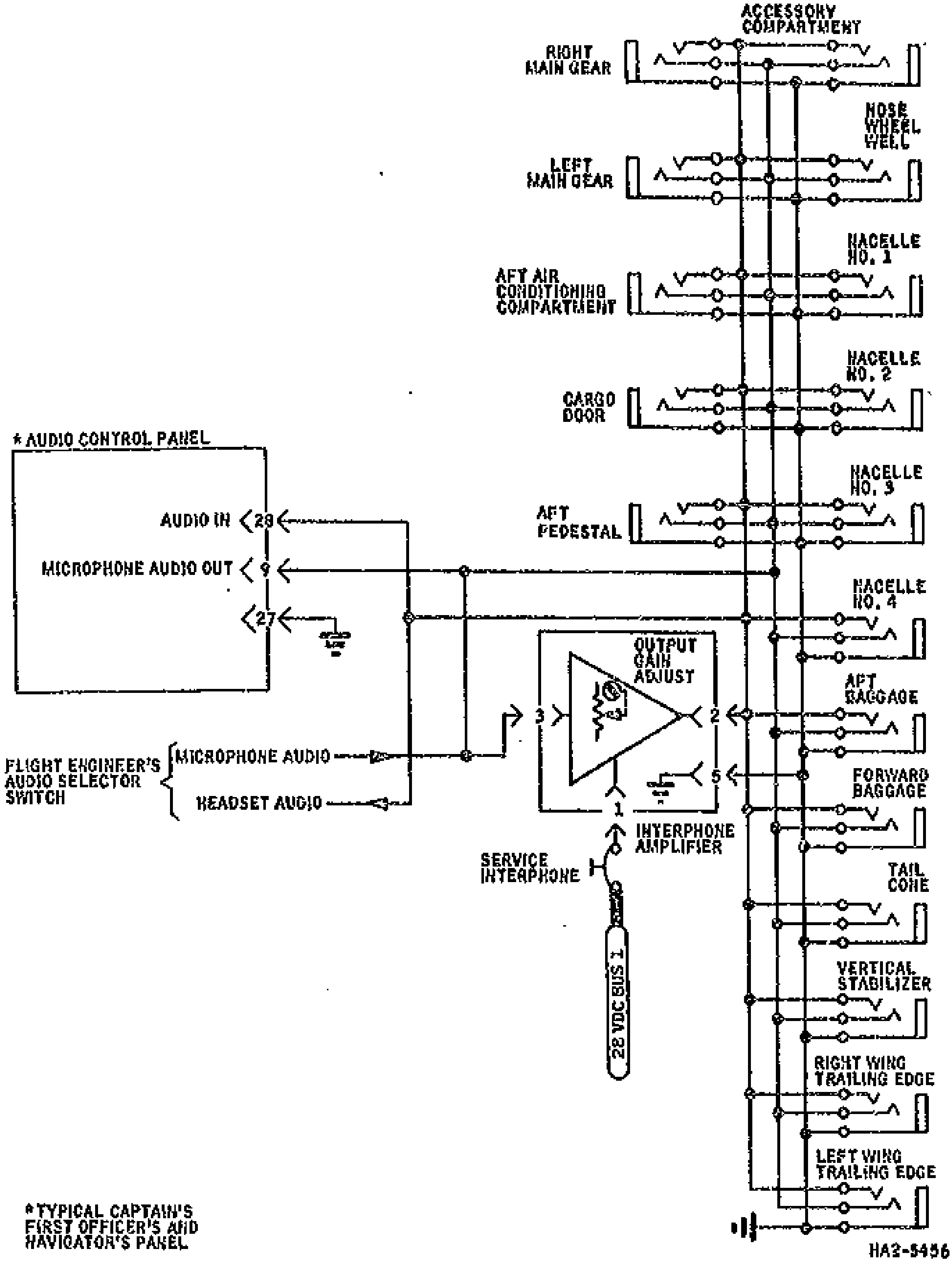
A. For handset or boomset operation from the interphone jack outlets, the interphone plug is inserted into the jack outlet and the microphone control switch is pressed. Microphone audio is applied to the amplifier input circuits. The audio output is applied to the audio control panels, handset receivers, and the interphone jack outlets.

B. For interphone operation from the flight crew station, the service interphone selector switches are placed in the service interphone position. Microphone audio is routed to the interphone amplifier input circuits. The audio output is routed to headsets of the interphone system and the selected headsets in the flight compartment.

3. To Operate Interphone

A. To operate interphone from interphone jack outlets:

(1) Energize electrical buses.



Interphone -- Simplified Schematic
Figure 1

(2) Insert handset or boomset plug into interphone jack outlet.

(3) Press microphone control switch.

B. To operate interphone from flight crew stations:

(1) Energize electrical buses.

(2) At audio control panels or engineer's station, place selector switches to service interphone.

(3) Using microphone at selected station, press microphone control switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches. (See Figure 1.)

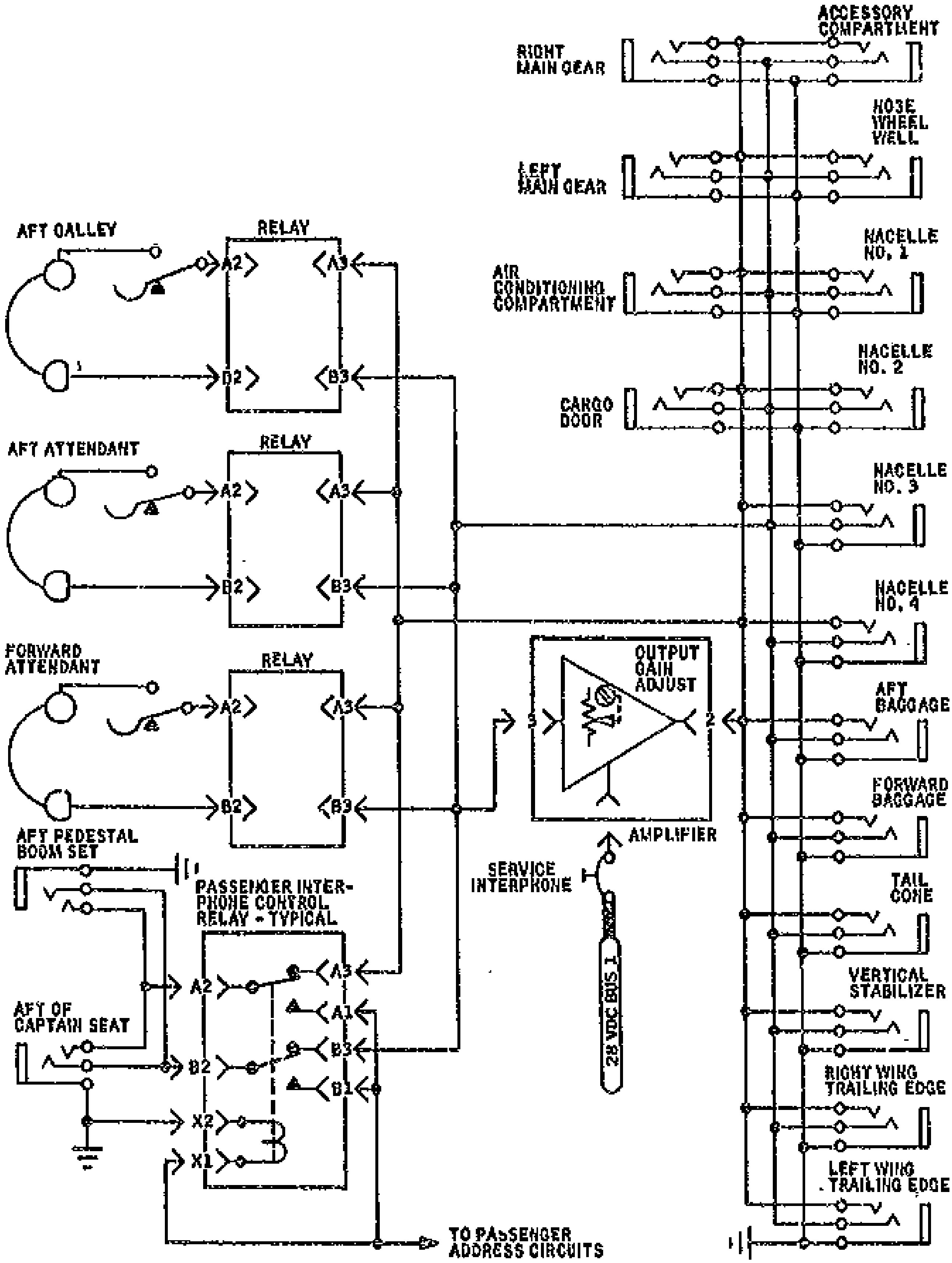
B. The interphone amplifier is installed in the left hand console and provides the necessary audio amplification for service and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connect directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed at locations throughout the aircraft where intercommunications are required to facilitate service and maintenance operations. Each jack outlet permits establishing simultaneous communications with all interphone-stations in the system. Jack outlets are wired so that connections are as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack mixing chamber and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected directly to the audio signal wiring and the mircophone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, aft galley station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.



Service Interphone -- Simplified Schematic
Figure 1

G. The flight compartment control relay and control switches used with the interphone system are the passenger address/interphone transfer relay, the pilot attendant call switch, and the mechanics call switch. The passenger address/interphone transfer relay is installed in the top panel of the electrical power center. When the pilot-to-attendant call switch is pressed, the interphone transfer relay momentarily energizes to open passenger address holding circuit, alert the attendant and ensure the headset is on the interphone system. Passenger address announcements cannot be made unless the passenger address announce switch is pressed. The mechanic call switch is installed in the overhead switch panel and alerts the ground crew to establish communication with the flight compartment. In addition the switch ensures the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

3. To Operate Interphone

A. To Operate Interphone From Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relay, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 6, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by 28-vdc bus 1 or battery bus when the battery radio power switch is in the battery position.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the accessory compartment, in the ceiling of the forward and aft baggage compartment, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, at the cargo door, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of the boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio, ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed at the aft pedestal in the flight compartment. The handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver is connected to the audio signal wiring, through the control relay, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, and in the aft attendant station. For use with the interphone system, each panel contains a handset hanger and selective call switches. Removal of the handset from the hanger operates the hanger switch to connect the

handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to connect the handset receiver to the audio signal wiring and mute the flight compartment loudspeakers.

H. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.

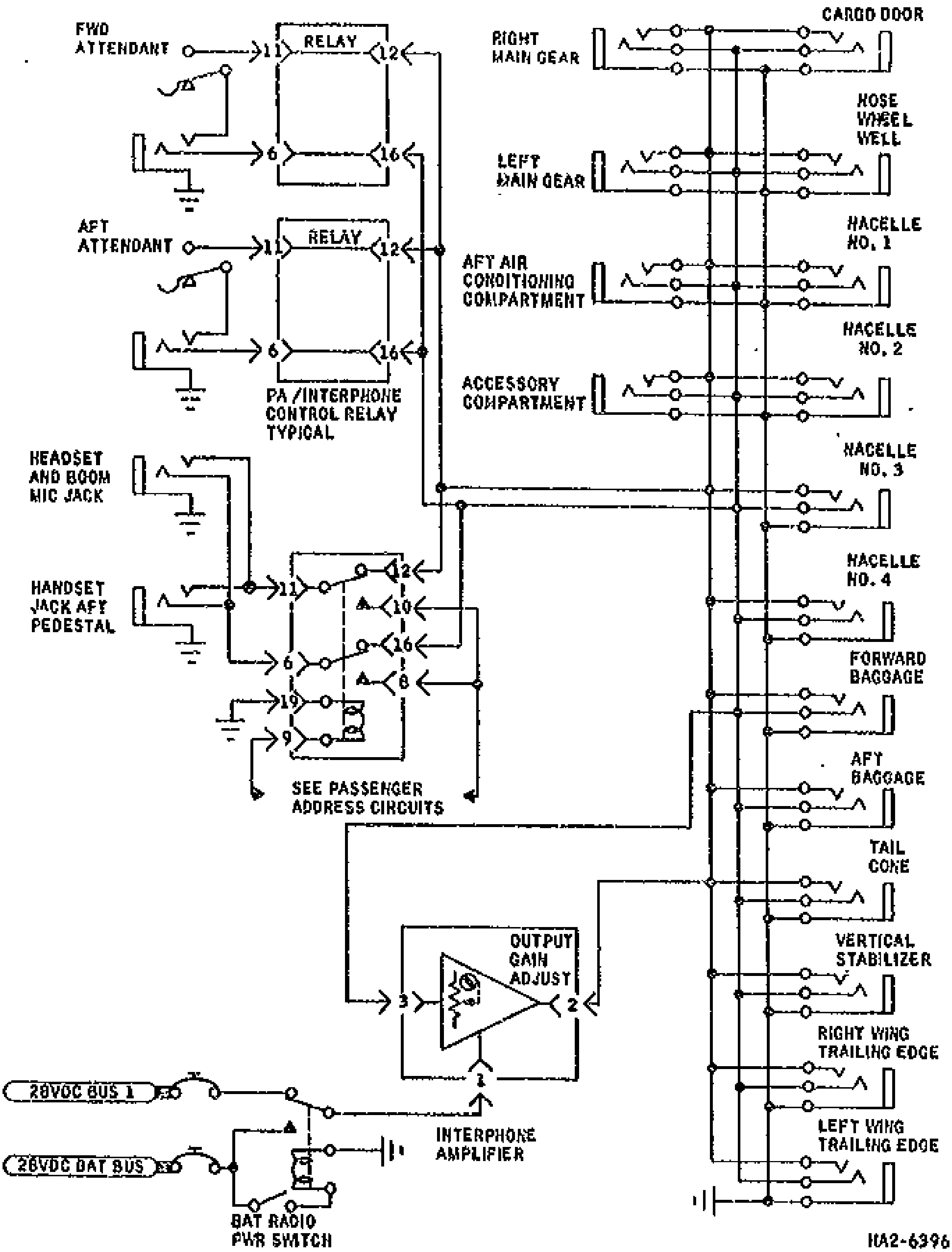
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed



Service Interphone -- Simplified Schematic
Figure 1

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed. The interphone system consists of an audio amplifier, interphone jack outlets, and flight compartment control switches. (See Figure 1.)

B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for service and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handset by the passenger address/ interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

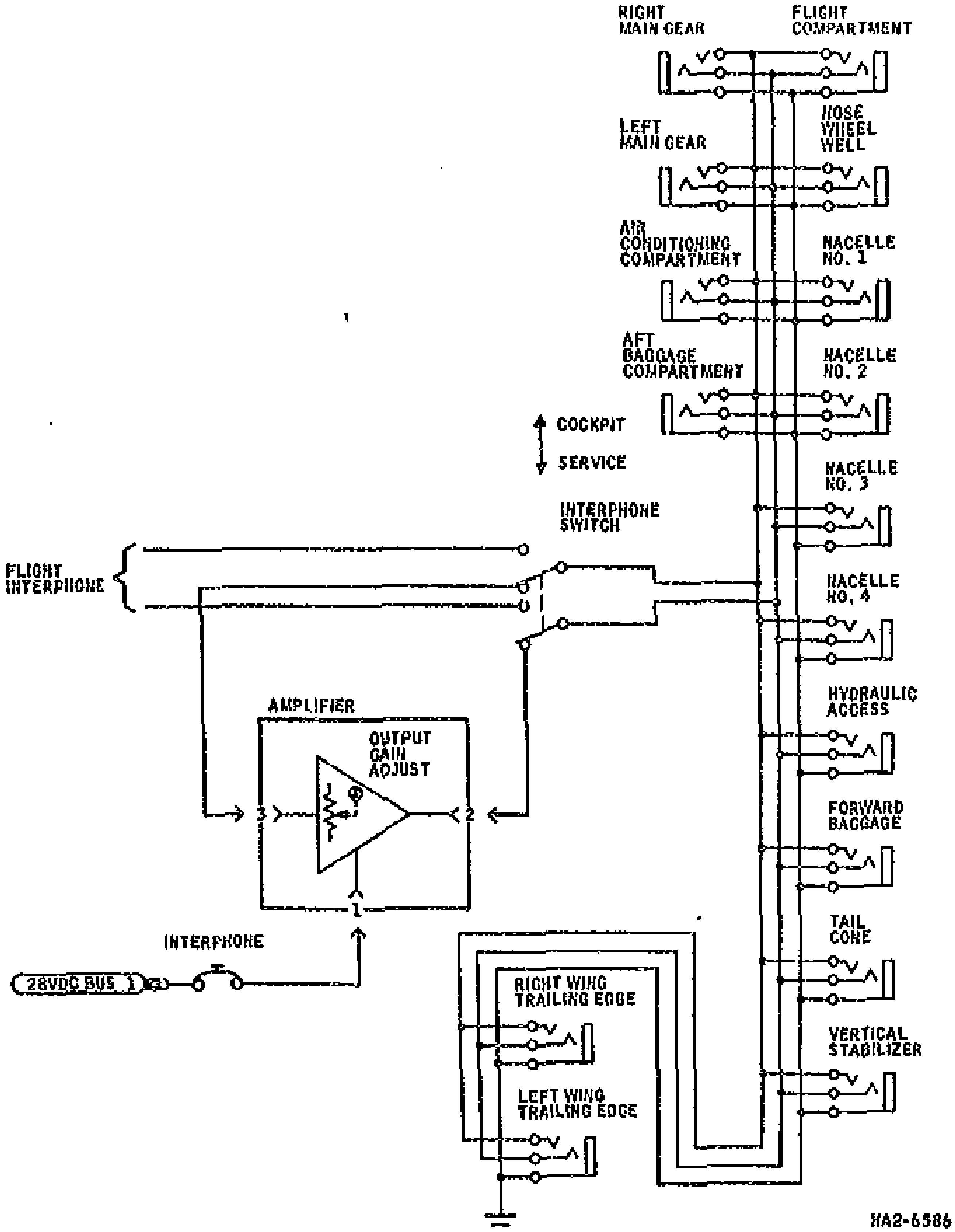
C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, in each engine nacelle, in the hydraulic accessories compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, and the vertical stabilizer.

D. The flight compartment interphone switch, located on the overhead switch panel, is used to parallel and isolate the service and flight interphone systems. The two position switch has a service and cockpit position.

E. The flight compartment control switches used with the interphone system are the attendant and the mechanic call switch. The attendant and mechanic call switches are located on the overhead switch panel and alerts attendant or ground crew to establish communication with the flight compartment. In addition, the switches ensure the handset is on the interphone system.

2. Operation

A. For handset or boomset operation from jack outlets a handset jack or a boomset jack is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets and to all handset stations.



Service Interphone -- Simplified Schematic
Figure 1

3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place interphone switch, located on the overhead switch panel, to service position.

(3) Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed, and between the flight compartment and cabin attendant stations. The interphone system consists of an audio amplifier, interphone jack outlets, passenger address/interphone control relays, handsets, cabin attendant panels, flight compartment hanger and switch, and flight compartment control switches.

B. The interphone amplifier is installed in the radio rack on shelf 5, and provides the necessary audio amplification for flight and maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets and connected to the handsets by the passenger address/interphone control relays. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed in the flight compartment, in the nose wheel well, at the cargo door, in each engine nacelle, in the accessory compartment, in the ceiling of the forward and aft baggage compartments, in the tail cone, in each main gear well, in the air-conditioning compartment, in the left-hand and right-hand wing trailing edge, and in the vertical stabilizer. In addition, a jack outlet is installed on the aft pedestal, parallel to the handset jack outlet, to permit the use of a boomset on the interphone system. Wiring to the jack outlets is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the interphone amplifier when the control relay is deenergized, and connects the handset audio signal wiring to the passenger address amplifier when the control relay is energized. Electrical connections are made through the receptacle mounted on the relay housing.

E. A handset is installed in the flight compartment and in each cabin attendant panel. Each handset consists of an audio receiver, microphone, and a push-to-talk switch. The handset receiver, at each attendant panel, is connected to the audio signal wiring by the hanger switch, and the microphone is connected to the audio signal wiring by the push-to-talk switch.

F. Cabin attendant panels are installed in the forward attendant station, in the aft attendant station, in the forward galley, and in the aft galley. For use with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the

hanger operates the hanger switch to connect the handset receiver to the audio signal wiring. The selective call switches alert flight personnel and ensure the handset is on the interphone system for station-to-station communications.

G. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the switch to mute the flight compartment loudspeakers.

H. The flight compartment control switches that function with the interphone system are the mechanics call switch and the attendant call switch. Both switches are installed in the overhead switch panel. The mechanic call switch is used to alert ground crew personnel to establish communication at the nose wheel well. The attendant call switch is used to alert attendants to establish communication with the flight compartment. A second function of these switches is to ensure that handset is connected to interphone system: This is accomplished by activating circuitry that opens the passenger address/interphone control relay holding circuit.

2. Operation

A. For handset or boomset operation from jack outlets a handset plug or a boomset plug is inserted into jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier. Amplifier output is applied to all jack outlets and to all handset stations.

B. For handset operation, the handset is removed from the hanger and the push-to-talk is pressed. Handset audio is applied to the amplifier. Amplifier output is applied to all jack outlets and to all handset stations.

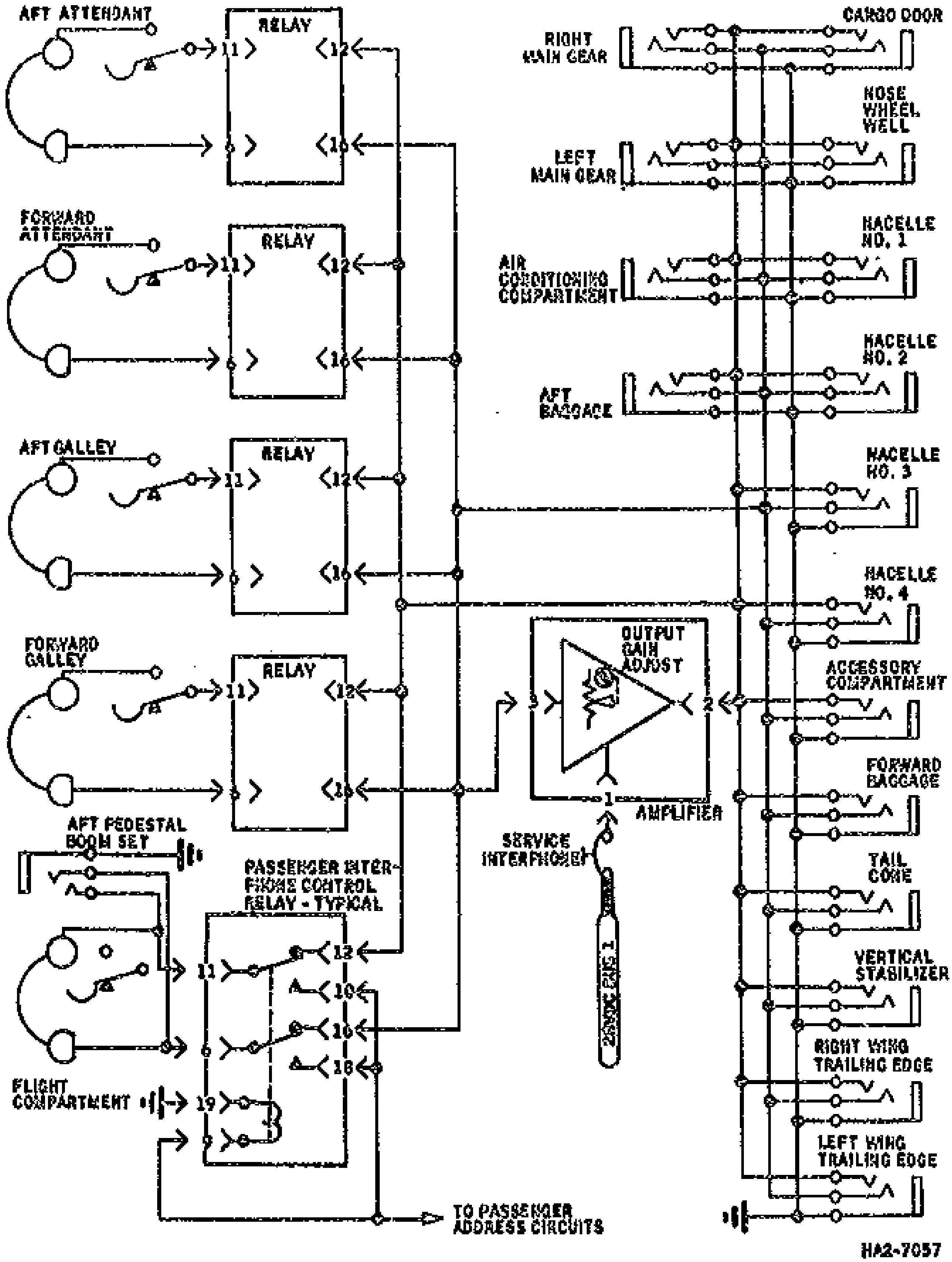
3. To Operate Interphone

A. To Operate Interphone from Jack Outlets

(1) Energize electrical buses.

(2) Place switches and controls to positions indicated.

Control	Position
Handset or boomset plug	Plug inserted
Push-to-talk switch	Depressed



Service Interphone -- Simplified Schematic
Figure 1

B. To Operate Interphone from Handset Stations

(1) Energize electrical buses.

(2) Remove handset from hanger.

(3) Press push-to-talk switch.

INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed. The interphone system consists of an audio amplifier, interphone jack outlets, handsets, and flight compartment control switches. (See Figure 1.)

B. The interphone amplifier is installed in the radio rack and provides the necessary audio amplification for maintenance communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. The amplifier is connected directly to the jack outlets. Electrical connections are made through a receptacle mounted on the amplifier chassis. Electrical power is supplied by radio dc bus 1.

C. Interphone jack outlets are installed at locations throughout the airplane where intercommunications are required to facilitate service and maintenance operations. Each jack outlet permits establishing simultaneous communication with all interphone-stations in the system. Jack outlets are wired so that connections are as follows: tip, receiver audio, ring, microphone audio, sleeve, audio common.

D. The flight compartment interphone controls are the mechanic call switch and the Flight/Service Interphone switch. The mechanic call switch, located on the overhead switch panel, is used to alert ground personnel to establish communications with the flight compartment. The Flight/Service Interphone switch, located on the aft pedestal, is used to parallel the service interphone system with the flight interphone system.

2. Operation

A. For service interphone operation from jack outlets a headset jack or a boomset jack is inserted into the jack outlet and the push-to-talk switch is pressed. Microphone audio is applied to the amplifier and amplified. Amplifier output is applied to all jack outlets.

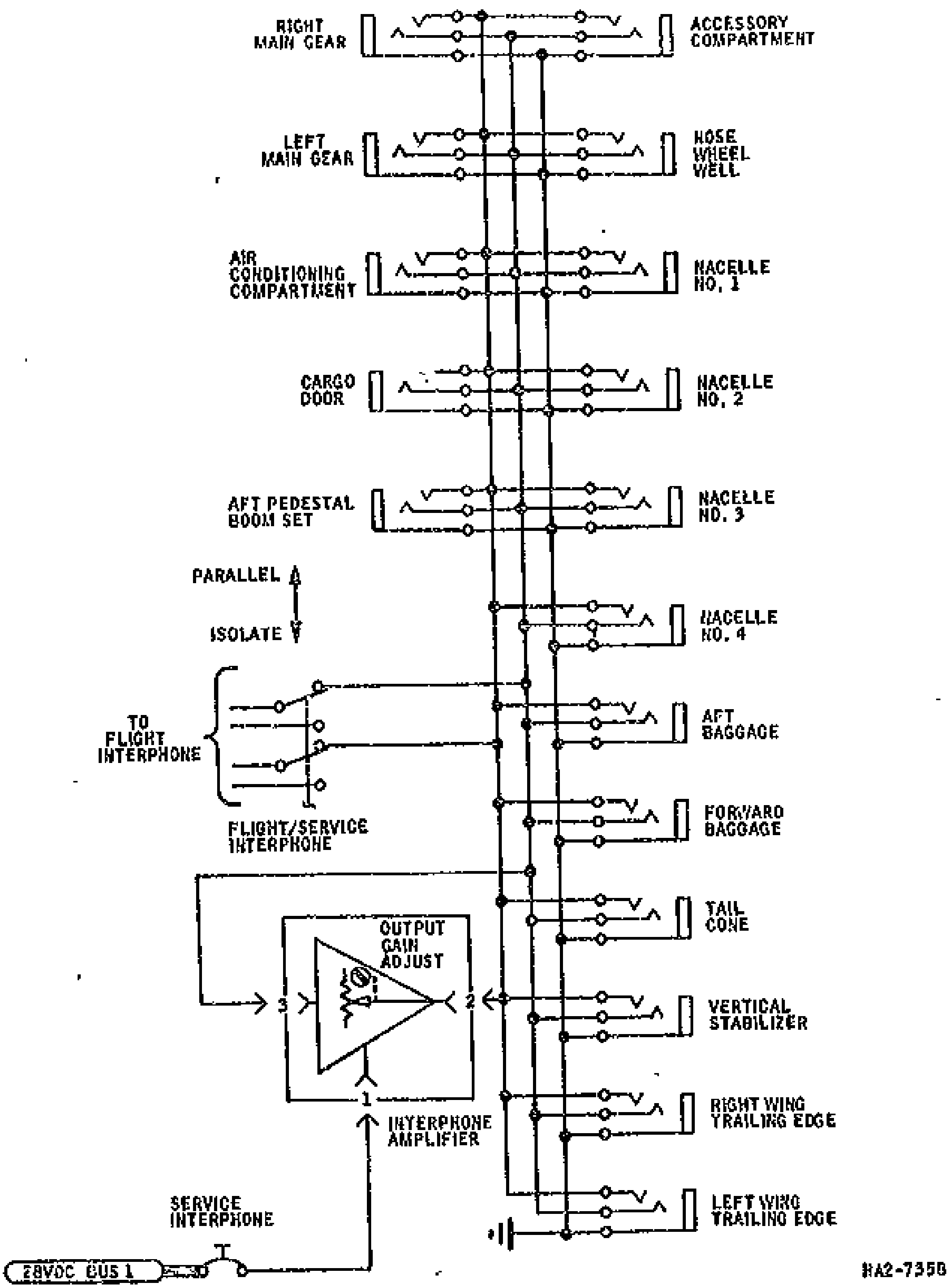
3. To Operate Interphone from Jack Outlets

A. Energize electrical buses.

B. Place Flight/Service Interphone switch to ISOLATE position.

C. Place switches and controls to positions indicated.

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Pressed



Service Interphone -- Simplified Schematic
Figure 1

INTERPHONE - TROUBLE SHOOTING

1. Trouble Shooting

Possible Causes	Isolation Procedure	Correction
A. NO INTERPHONE COMMUNICATIONS AT ALL STATIONS		
(1) No power applied to system	Visually check circuit breaker.	Close circuit breaker, if open.
(2) Faulty amplifier	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
(3) Faulty wiring on power input to amplifier	Check wiring for continuity.	Repair or replace wiring as necessary.
(4) Faulty audio signal wiring	Check audio signal wiring for grounds and continuity.	Repair or replace wiring as necessary.
NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.		
B. NO INTERPHONE COMMUNICATIONS AT ONE STATION		
(1) Faulty handset	Check handset, using station known to be serviceable.	Replace faulty handset.
(2) Faulty jack outlet	Check jack outlet for continuity.	Replace faulty jack outlet.
(3) Faulty audio signal wiring	Check audio signal wiring for grounds and for continuity.	Repair or replace wiring as necessary.

Possible Causes	Isolation Procedure	Correction
C. VOLUME TOO HIGH OR TOO LOW AT ALL STATIONS		
(1) Amplifier out of adjustment	Adjust volume control on amplifier. (See 23-40-1, paragraph 3A.)	If adjustment is not satisfactory, replace amplifier.

INTERPHONE - TROUBLE SHOOTING

1. Trouble Shooting

	Possible Causes	Isolation Procedure	Correction
A.	NO INTERPHONE COMMUNICATIONS AT ALL STATIONS		
(1)	Interphone circuit breaker not closed	Visually check circuit breaker.	Close circuit breaker, if open.
(2)	Faulty amplifier	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
(3)	Faulty power input wiring to audio integrating amplifier.	Check power input wiring for continuity.	Repair or replace faulty wiring as necessary.
(4)	Faulty amplifier output signal wiring.	Check output wiring for continuity and for absence of grounds.	Repair or replace faulty wiring as necessary.
	NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.		
B.	NO INTERPHONE COMMUNICATIONS AT ONE HANDSET OR JACK OUTLET STATION		
(1)	Faulty handset	Check handset at station known to be serviceable.	Replace faulty handset.
(2)	Faulty jack outlet	Check jack outlet for continuity.	Replace faulty jack outlet.
(3)	Faulty audio signal wiring	Check audio signal wiring for continuity.	Repair or replace faulty wiring as necessary.

Possible Causes	Isolation Procedure	Correction
C. VOLUME TOO HIGH OR TOO LOW AT HANDSET AND JACK OUTLETS STATIONS		
(1) Faulty audio integrating amplifier.	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
D. VOLUME TOO HIGH OR TOO LOW AT JACK OUTLET STATIONS		
(1) Faulty service volume control adjustment	Adjust service volume control (see adjustment/ Test).	If adjustment is not satisfactory, replace amplifier.
E. VOLUME TOO HIGH OR TOO LOW AT HANDSET STATIONS		
(1) Faulty flight volume control adjustment	Adjust flight volume control (see Adjustment/ Test).	If adjustment is not satisfactory, replace amplifier.

INTERPHONE - TROUBLE SHOOTING

1. Trouble Shooting

	Possible Causes	Isolation Procedure	Correction
A.	**NO INTERPHONE COMMUNICATIONS AT ALL STATIONS**		
(1)	No power applied to system	Visually check circuit breaker.	Close circuit breaker, if open.
(2)	Faulty amplifier	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
(3)	Faulty wiring on power input to amplifier	Check wiring for continuity.	Repair or replace wiring as necessary.
(4)	Faulty audio signal wiring	Check audio signal wiring for grounds and continuity.	Repair or replace wiring as necessary.
	NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.		
B.	**NO INTERPHONE COMMUNICATIONS AT ONE STATION**		
(1)	Faulty handset	Check handset, using station known to be serviceable.	Replace faulty handset.
(2)	Faulty jack outlet	Check jack outlet for continuity.	Replace faulty jack outlet.
(3)	Faulty audio signal wiring	Check audio signal wiring for grounds and for continuity.	Repair or replace wiring as necessary.

INTERPHONE - TROUBLE SHOOTING

1. Touble Shooting

Possible Causes	Isolation Procedure	Correction
A. NO INTERPHONE COMMUNICATIONS AT ALL STATIONS.		
(1) No power	(a) Visually check service interphone circuit breaker. (b) Check power input to amplifier with voltmeter.	(a) Close circuit breaker, if open. (b) Repair or replace faulty wiring.
(2) Faulty amplifier	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
(3) Faulty audio signal wiring on amplifier output or input.	Check audio signal wiring for continuity.	Repair or replace wiring as necessary.
NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.		
B. NO INTERPHONE COMMUNICATION AT ONE JACK OUTLET STATION.		
(1) Faulty handset.	Check handset using station known to be serviceable.	Replace faulty handset.
(2) Faulty jack outlet.	Check jack outlet for continuity.	Replace faulty jack outlet.
(3) Faulty audio signal wiring.	Check audio signal wiring for continuity.	Repair or replace faulty wiring.

Possible Causes	Isolation Procedure	Correction
C. VOLUME TOO HIGH OR TOO LOW AT ALL STATIONS		
(1) Amplifier out of adjustment.	Adjust volume control on amplifier (see 23-40-1).	If adjustment is not satisfactory, replace amplifier with one known to be serviceable.
D. NO INTERPHONE COMMUNICATION AT ONE AUDIO CONTROL PANEL		
(1) No power on system	Visually check associated station audio integrating circuit breaker.	Close circuit breakers, if open.
(2) Faulty microphone	Check microphone at station known to be serviceable.	Replace faulty microphone.
(3) Faulty audio control panel	Interchange audio control panel with one known to be serviceable.	Replace faulty audio control panel.
(4) Faulty audio signal wiring	Check audio signal wiring for grounds and continuity.	Repair or replace faulty wiring.

INTERPHONE - TROUBLE SHOOTING

1. Trouble Shooting

Possible Causes	Isolation Procedure	Correction
A. NO INTERPHONE COMMUNICATIONS AT ALL STATIONS.		
(1) No power	(a) Visually check service interphone circuit breaker. (b) Check power input to amplifier with voltmeter.	(a) Close circuit breaker, if open. (b) Repair or replace faulty wiring.
(2) Faulty amplifier	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
(3) Faulty audio signal wiring on amplifier output or input.	Check audio signal wiring for continuity.	Repair or replace wiring as necessary.

NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.

Possible Causes	Isolation Procedure	Correction
B. NO INTERPHONE COMMUNICATION AT ONE JACK OUTLET STATION.		
(1) Faulty handset.	Check handset using station known to be serviceable.	Replace faulty handset.
(2) Faulty jack outlet.	Check jack outlet for continuity.	Replace faulty jack outlet.
(3) Faulty audio signal wiring.	Check audio signal wiring for continuity.	Repair or replace faulty wiring.

Possible Causes	Isolation Procedure	Correction
C. VOLUME TOO HIGH OR TOO LOW AT ALL STATIONS		
(1) Amplifier out of adjustment.	Adjust volume control on amplifier (see 23-40-1).	If adjustment is not satisfactory, replace amplifier with one known to be serviceable.
D. NO INTERPHONE COMMUNICATION AT ONE AUDIO CONTROL PANEL		
(1) No power on system	Visually check associated station audio integrating circuit breaker.	Close circuit breakers, if open.
(2) Faulty microphone or headset	Check microphone or headset at station known to be serviceable.	Replace faulty microphone or headset, as applicable.
(3) Faulty audio control panel	Interchange audio control panel with one known to be serviceable.	Replace faulty audio control panel.
(4) Faulty audio signal wiring	Check audio signal wiring for grounds and continuity.	Repair or replace faulty wiring.
E. NO INTERPHONE COMMUNICATION AT ENGINEER'S STATION		
(1) Faulty engineer's audio selector switch.	Check continuity through selector switch.	Replace faulty selector switch.
(2) Faulty microphone or headset	Check microphone or headset at station known to be serviceable.	Replace faulty microphone or headset, as applicable.

INTERPHONE - MAINTENANCE PRACTICES

1. General

   A. If the interphone amplifier is replaced, or, audio signal wiring repaired or replaced, perform the entire test. If a component at any one station is replaced, that station only need be tested. See 23-30-2 for handset test procedures.

2. Adjustment/Test

   A. Test Interphone System

      (1) From any handset station, establish communications with other handset stations and with each jack outlet station.

      NOTE: Communication should be discernable and free from distortion.

INTERPHONE - MAINTENANCE PRACTICES

1. General

   A. The audio integrating amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier to a satisfactory level (see Adjustment/Test). The audio integrating amplifier is installed in the inboard radio rack on shelf 6.

2. Removal/Installation Audio Integrating Amplifier

   A. Remove Audio Integrating Amplifier

      (1) Open interphone circuit breakers located on battery bus, right and left emergency bus.

      WARNING: TAG AND SAFETY CIRCUIT BREAKER.

      (2) Remove radio rack panel 6.

      (3) Disconnect electrical connector.

      (4) Release snap lock fasteners.

      (5) Remove amplifier from mounting plate.

   B. Install Audio Integrating Amplifier

      (1) Ensure that interphone circuits breaker located on battery bus, right and left emergency bus are open, tagged, and safetied.

      (2) Place amplifier on mounting rack and lock fasteners.

      (3) Connect electrical connector.

      (4) Close interphone circuit breakers.

      (5) Perform interphone and audio integrating test procedures.

3. Adjust/Test Audio Integrating Amplifier

   A. Adjust Flight Volume Control

      (1) Establish communications between attendant panel stations using handsets.

(2) While speaking into one handset microphone with normal tone, adjust flight volume control until audio level is satisfactory.

NOTE: If adjustment is not satisfactory, replace audio integrating amplifier.

B. Adjust Service Volume Control

(1) Place interphone jack switch in on position.

(2) Establish communications between two interphone jack outlet stations using handsets.

(3) While speaking into one handset microphone with normal tone, adjust service audio volume control until audio level is satisfactory.

NOTE: If adjustment is not satisfactory, replace audio integrating amplifier.

C. Test Interphone

(1) Place interphone jack switch in on position.

(2) From one handset station, establish communications with other handset station using handset push-to-talk switches. Interphone audio should be discernible and free of distortion.

(3) Insert a handset jack in each of the interphone jack outlets listed below. Establish communications between the interphone jack outlet station and one of the attendant stations using the handset push-to-talk switches. Interphone audio should be discernible and free of distortion.

Ground power access panel	Station 55
Left wing trailing edge	Station X_{rs} 443
Nacelle 1	
Nacelle 2	
Left main gear well	Station 909
Right main gear well	Station 909
Nacelle 3	
Nacelle 4	
Right wing trailing edge	Station X_{RS} 443
Forward baggage compartment	Station 100
Aft baggage compartment	Station 1540
Tail cone	Station 1793
Hydraulic accessory compartment	Station 640
Aft air conditioning compartment	Station 35
Vertical stabilizer	Station Z_R 219
Aft pedestal	

(4) Place interphone jack switch to off position.

INTERPHONE - MAINTENANCE PRACTICES

1. General

A. The interphone system provides communications between areas where service and maintenance operation are most frequently performed, and between the flight compartment and cabin attendant stations. If the interphone amplifier is replaced, or audio signal wiring is repaired or replaced, perform the entire test. If a component at any one station is replaced, that station only need be tested.

2. Adjustment/Test

A. Test Interphone System

(1) Using any handset station, establish communications with other handset stations and with each jack outlet station.

NOTE: Communications should be discernable and free from distortion.

INTERPHONE--MAINTENANCE PRACTICES

1. General

   A. If the interphone amplifier is replaced, or, audio signal wiring repaired or replaced, perform entire service interphone system tests. If audio control panel, or jack outlet is replaced, perform service interphone test at affected station. To communicate between any two jack outlet stations, insert handset jack into outlets and depress push-to-talk switch.

2. Adjustment/Test Service Interphone

   A. Test service interphone

Operation	Station	Desired Result
(1) Place audio control panel communication and navigation receiver audio control switches to OFF.	Aft pedestal	Isolation of all radio receiver audio.
(2) Place audio control panel interphone switch up and depress microphone selector switch; volume control to midposition.	Aft pedestal	Station on service interphone.
(3) Use pilots microphone and headset to communicate with service outlets.	Pilots station	Audio discernable and free of distortion.
(4) Insert handset jack into jack outlet at aft pedestal.	Aft pedestal	Selection of handset microphone.
(5) Connect another handset at each service outlet in turn and communicate with aft pedestal.	Interphone outlets	Audio discernable and free of distortion.

	Operation	Station	Desired Result
(6)	Audio control panel service interphone and microphone control switches to OFF.	Aft pedestal	End service interphone test.

INTERPHONE - MAINTENANCE PRACTICES

1. General

   A. The interphone system provides communications between areas where service and maintenance operation are most frequently performed, and between the flight compartment and cabin attendant stations. If the interphone amplifier is replaced, or audio signal wiring is repaired or replaced, perform the entire test. If a component at any one station is replaced, that station only need be tested.

2. Adjustment/Test

   A. Test Interphone System

      (1) Place interphone switch, located on overhead switch panel, to service position.

      (2) Using any handset station, establish communications with other handset stations and with each jack outlet station.

      (3) Service interphone audio should be discernible and free from distortion.

      NOTE: Steps (4) through (6) not applicable for Airplanes N1803 through N1807.

      (4) Using handset jack at aft pedestal, establish communications with each jack outlet.

      (5) Place interphone switch to cockpit position and communicate from a flight crew interphone station to a jack outlet station.

      (6) Flight interphone audio should be discernible and free from distortion.

INTERPHONE -- MAINTENANCE PRACTICES

1. General

A. If the interphone amplifier is replaced, or, audio signal wiring repaired or replaced, perform the entire service interphone system test. If a service jack outlet is replaced, perform service interphone test for the affected station. To communicate between any two jack outlet stations, insert handset into jack outlets and depress push-to-talk switch.

2. Adjustment/Test Service Interphone

A. Test service interphone

(1) At overhead switch panel, place service interphone control switch to service interphone position.

(2) At radio rack, place service interphone jack switch to service interphone jacks.

Operation	Desired Result
(3) At forward attendant panel, communicate with aft attendant station and when applicable galley and mid cabin station.	Audio discernible and free of distortion.
(4) Connect handset at each service interphone jack outlet in turn and communicate with forward attendant station.	Audio discernible and free of distortion.

B. Test Service interphone communication to flight compartment and Nose Wheel Jack Outlet

Operation	Desired Result
(1) At overhead switch panel, place service interphone control switch to off.	Turns off service interphone amplifier and cross connects the service interphone system to the flight interphone amplifier.

Operation	Desired Result
(2) At captain's audio control panel, position interphone audio selector switch to on and press interphone microphone selector switch.	Connects captain's station to the interphone system.
(3) Insert handset jack into nose wheel well jack outlet.	
(4) Employ hand microphone and handset, communicate with nose wheel well and forward attendant station.	Audio discernible and free of distortion.

INTERPHONE - MAINTENANCE PRACTICES

1. General

   A. The interphone system provides communications between areas where service and maintenance operation are most frequently performed, and between the flight compartment and cabin attendant stations. If the interphone amplifier is replaced, or audio signal wiring is repaired or replaced, perform the entire test. If a component at any one station is replaced, that station only need be tested.

2. Adjustment/Test

   A. Test Interphone System

      (1) Place interphone switch to service position.

      (2) Using any handset station, establish communications with other handset stations and with each jack outlet station.

      NOTE: Communications should be discernible and free from distortion.

INTERPHONE - MAINTENANCE PRACTICES

1. General

   A. If the interphone amplifier is replaced, or, audio signal wiring repaired or replaced, perform entire interphone system test. If audio control panel, or jack outlet is replaced, perform interphone test for the affected station. In addition, when an audio control panel is replaced, perform the test procedures required for the audio integrating system. To communicate between any two jack outlet stations, insert handset plug into jack outlet and press microphone push-to-talk switch.

2. Adjustment/Test Service Interphone

   A. Test service interphone

Operation	Station	Desired Result
(1) Place audio control panel communication and navigation receiver audio control switches off, and the emergency switch to normal.	Captain's First Officer's Navigator's	Isolation of all input audio.
(2) Place audio control panel service interphone control switch up and place microphone selector switch to service interphone position.	Captain's First Officer's Navigator's	Station on service interphone.
(3) Use microphone and headset to communicate with service outlets.	Captain's First Officer's Navigator's	Audio discernable and free of distortion.
(4) Insert handset plug into jack outlet at aft pedestal.	Aft pedestal	Selection of handset microphone.

	Operation	Station	Desired Result
(5)	Use handset at aft pedestal, communicate with all service interphone outlets, and attendant handsets.	Service interphone outlets. Forward and aft attendant panels.	Audio discernable and free of distortion.
(6)	Place engineer's audio selectors switch to service interphone position and communicate with any service interphone station.	Flight Engineer's station	Audio discernable and free of distortion.

INTERPHONE - MAINTENANCE PRACTICES

1. General

A. The interphone system provides communications between areas where service and maintenance operations are most frequently performed. If the interphone amplifier is replaced, or, audio signal wiring repaired or replaced, perform the entire service interphone system test. If a service interphone jack outlet is replaced, perform service interphone test for the affected station. To communicate between any two jack outlet stations, insert handset into jack outlets and press push-to-talk switch.

2. Adjustment/Test Service Interphone

A. Test Service Interphone

(1) Place Flight/Service Interphone switch, located on the aft pedestal, to ISOLATE position.

(2) Using jack outlet at aft pedestal, establish communications with each jack outlet station.

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

A. The interphone amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier gain to a satisfactory level. (See Adjustment/Test.) The audio integrating amplifier is identical to, and interchangeable with, the interphone amplifier. The amplifier is housed in a 2 3/32- by 3 5/32-inch box, which is attached to a mounting plate with two screws that extend through the housing to the mounting plate. The interphone amplifier is installed in the inboard radio rack on shelf 7.

2. Removal/Installation Interphone Amplifier

A. Remove Interphone Amplifier

(1) Open interphone circuit breaker located on radio dc bus 1.

WARNING: TAG AND SAFETY CIRCUIT BREAKER.

(2) Remove radio rack panel 7.

(3) Remove attaching screws.

(4) Remove housing from mounting plate.

(5) Disconnect electrical connector.

B. Install Interphone Amplifier

(1) Ensure that interphone circuit breaker, located on radio dc bus 1, is open, tagged, and safetied.

(2) Connect electrical disconnect.

(3) Place amplifier housing on mounting plate and secure with attaching screws.

(4) Install radio rack panel.

(5) Close circuit breaker.

(6) Perform interphone test procedure. (See 23-40-0.)

3. Adjustment/Test Interphone Amplifier

A. Adjust Interphone Amplifier

(1) Place interphone system controls to interphone position. (See 23-40-0.)

(2) While speaking into handset, adjust interphone amplifier gain control until audio level is satisfactory.

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

   A. The interphone amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier gain to a satisfactory level. (See Adjustment/Test.) The audio integrating amplifier is identical to, and interchangeable with, the interphone amplifier. The amplifier is housed in a 2 3/32- by 2 5/32-inch box, which is attached to a mounting plate with two screws that extend through the housing to the mounting plate. The interphone amplifier is installed in the outboard rack on shelf 6.

2. Removal/Installation Interphone Amplifier

   A. Remove Interphone Amplifier

      (1) Open interphone circuit breaker located on radio dc bus 1.

      WARNING: TAG AND SAFETY CIRCUIT BREAKER.

      (2) Remove radio rack panel 6.

      (3) Remove attaching screws.

      (4) Remove housing from mounting plate.

      (5) Disconnect electrical connector

   B. Install Interphone Amplifier

      (1) Ensure that interphone circuit breaker, located on radio dc bus 1, is open, tagged, and saftied.

      (2) Connect electrical disconnect.

      (3) Place amplifier housing on mounting plate and secure with attaching screws.

      (4) Install radio rack panel.

      (5) Close circuit breaker.

      (6) Perform interphone test procedure. (See 23-40-0.)

3. Adjustment/Test Interphone Amplifier

A. Adjust Interphone Amplifier

(1) Place interphone system controls to interphone position. (See 23-40-0.)

(2) While speaking into handset, adjust interphone amplifier gain control until audio level is satisfactory.

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

   A. The interphone amplifier should be replaced if the output is extremely low. The amplifier is housed in a 1/4 ATR case and is located in the outboard radio rack on shelf 5. Isolation modules within the amplifier are used with the interphone system and the audio integrating system.

2. Removal/Installation Interphone Amplifier

   A. Remove Amplifier

      (1) Open interphone circuit breaker located on left emergency bus.

      WARNING: TAG AND SAFETY CIRCUIT BREAKER.

      (2) Remove radio rack panel 6.

      (3) Loosen and disengage knurled nut from mounting bracket in lower front panel of amplifier.

      (4) Pull amplifier unit out of mounting rack.

   B. Install Amplifier

      (1) Ensure interphone circuit breaker located on left emergency bus is open, tagged, and safetied.

      (2) Visually check amplifier receptacle and mounting rack connector for damage and presence of foreign objects.

      (3) Install amplifier unit on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front of amplifier unit.

      (5) Install radio rack panel.

      (6) Close circuit breaker.

3. Adjustment/Test Interphone Amplifier

   A. Test Interphone Amplifier

      (1) Perform interphone test procedure. (See 23-40-0.)

      (2) Perform audio integrating test procedure. (See 23-50-0.)

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

   A. The interphone amplifier should be replaced if the output is extremely low. The amplifier is housed in a 1/4 ATR case and is located in the inboard radio rack on shelf 3. Isolation modules within the amplifier are used with the interphone system and the audio intergrating system.

2. Removal/Installation Interphone Amplifier

   A. Remove Amplifier

      (1) Open first officer's audio circuit breaker located on right emergency bus.

      WARNING: TAG AND SAFETY CIRCUIT BREAKER.

      (2) Remove radio rack panel 3.

      (3) Loosen and disengage knurled nut from mounting bracket in lower front panel of amplifier.

      (4) Slide amplifier unit out of mounting rack.

   B. Install Amplifier

      (1) Ensure first officer's audio circuit breaker located on right emergency bus is open, tagged, and safetied.

      (2) Visually check amplifier receptacle and mounting rack connector for damage and presence of foreign objects.

      (3) Install amplifier unit on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front of amplifier unit.

      (5) Install radio rack panel.

      (6) Close circuit breaker.

3. Adjustment/Test Interphone Amplifier

   A. Test Interphone Amplifier

      (1) Perform interphone test procedure. (See 23-40-0.)

      (2) Perform audio integrating test procedure. (See 23-50-0.)

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

A. The interphone amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier gain to a satisfactory level. (See Adjustement/Test.) The audio integrating amplifier is identical to, and interchangeable with, the interphone amplifier. The amplifier is housed in a 2 3/32- by 3 5/32-inch box, which is attached to a mounting plate with two screws that extend through the housing to the mounting plate. The interphone amplifier is installed in the left hand console.

2. Removal/Installation Interphone Amplifier

A. Remove Interphone Amplifier

(1) Open interphone circuit breaker located on radio dc bus 1.

WARNING: TAG AND SAFETY CIRCUIT BREAKER.

(2) Remove left hand console access door.

(3) Remove attaching screws.

(4) Remove housing from mounting plate.

(5) Disconnect electrical connector.

B. Install Interphone Amplifier

(1) Ensure that interphone circuit breaker, located on radio dc bus 1, is open, tagged, and safetied.

(2) Connect electrical disconnect.

(3) Place amplifier housing on mounting plate and secure with attaching screws.

(4) Install left hand console access door.

(5) Close circuit breaker.

(6) Perform interphone test procedure. (See 23-40-0.)

3. Adjustment/Test Interphone Amplifier

A. Adjust Interphone Amplifier

(1) Place interphone system controls to interphone position. (See 23-40-0.)

(2) While speaking into handset, adjust interphone amplifier gain control until audio level is satisfactory.

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

   A. The interphone amplifier should be replaced if the output cannot be adjusted to a satisfactory level. The amplifier is installed in the outboard radio rack on shelf 5.

2. Removal/Installation Audio Integrating Amplifier

   A. Remove Audio Integrating Amplifier

      (1) Open interphone circuit breaker located on radio dc bus 2.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (2) Remove radio rack panel 5.

      (3) Disconnect electrical connector.

      (4) Release snap lock fasteners.

      (5) Remove amplifier from mounting plate.

   B. Install Audio Integrating Amplifier

      (1) Ensure that interphone circuit breakers located on radio dc bus 2 is open, tagged and safetied.

      (2) Place amplifier on mounting plate and lock snap lock fasteners.

      (3) Connect electrical connector.

      (4) Close interphone circuit breaker.

      (5) Perform interphone test procedures. (See 23-40-0.)

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

A. The interphone amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier gain to a satisfactory level. (See Adjustment/Test.) The audio integrating amplifier is identical to, and interchangeable with, the interphone amplifier. The amplifier is housed in a 2 3/32- by 3 5/32-inch box, which is attached to a mounting plate with two screws that extend through the housing to the mounting plate. The interphone amplifier is installed in the outboard rack on shelf 5.

2. Removal/Installation Interphone Amplifier

A. Remove Interphone Amplifier

(1) Open interphone circuit breaker located on radio dc bus 1.

WARNING: TAG AND SAFETY CIRCUIT BREAKER.

(2) Remove radio rack panel 5.

(3) Remove attaching screws.

(4) Remove housing from mounting plate.

(5) Disconnect electrical connector.

B. Install Interphone Amplifier

(1) Ensure that interphone circuit breaker, located on radio dc bus 1, is open, tagged, and safetied.

(2) Connect electrical disconnect.

(3) Place amplifier housing on mounting plate and secure with attaching screws.

(4) Install radio rack panel.

(5) Close circuit breaker.

(6). Perform interphone test procedure. (See 23-40-0.)

3. Adjustment/Test Interphone Amplifier

A. Adjust Interphone Amplifier

(1) Place interphone system controls to interphone position. (See 23-40-0.)

(2) While speaking into handset, adjust interphone amplifier gain control until audio level is satisfactory.

INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

   A. The interphone amplifier should be replaced if the output is extremely low. The amplifier is housed in a 1/4 ATR case and is located in the radio rack on shelf 1 (airplanes 801 through 822) and on shelf 3 (airplanes 860 and subsequent). Isolation modules within the amplifier are used with the interphone system and the audio integrating system.

2. Removal/Installation Interphone Amplifier

   A. Remove Amplifier

      (1) Open first officer's audio circuit breaker located on right emergency bus.

      WARNING: TAG AND SAFETY CIRCUIT BREAKER

      (2) Remove applicable radio rack panel.

      (3) Loosen and disengage knurled nut from mounting bracket in lower front panel of amplifier.

      (4) Slide amplifier unit out of mounting rack.

   B. Install Amplifier

      (1) Ensure first officer's audio circuit breaker located on right emergency bus is open, tagged, and safetied.

      (2) Visually check amplifier receptacle and mounting rack connector for damage and presence of foreign objects.

      (3) Install amplifier unit on mounting rack.

      (4) Engage and tighten knurled nut on mounting bracket on lower front of amplifier unit.

      (5) Install radio rack panel.

      (6) Close circuit breaker.

3. Adjustment/Test Interphone Amplifier

   A. Test Interphone Amplifier

      (1) Perform interphone test procedure. (See 23-40-0.)

      (2) Perform audio integrating test procedure. (See 23-50-0.)

SERVICE INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The service interphone system integrates the audio integrating system with an audio amplifier and interphone jack outlets located in areas where service and maintenance operations are more frequently performed.

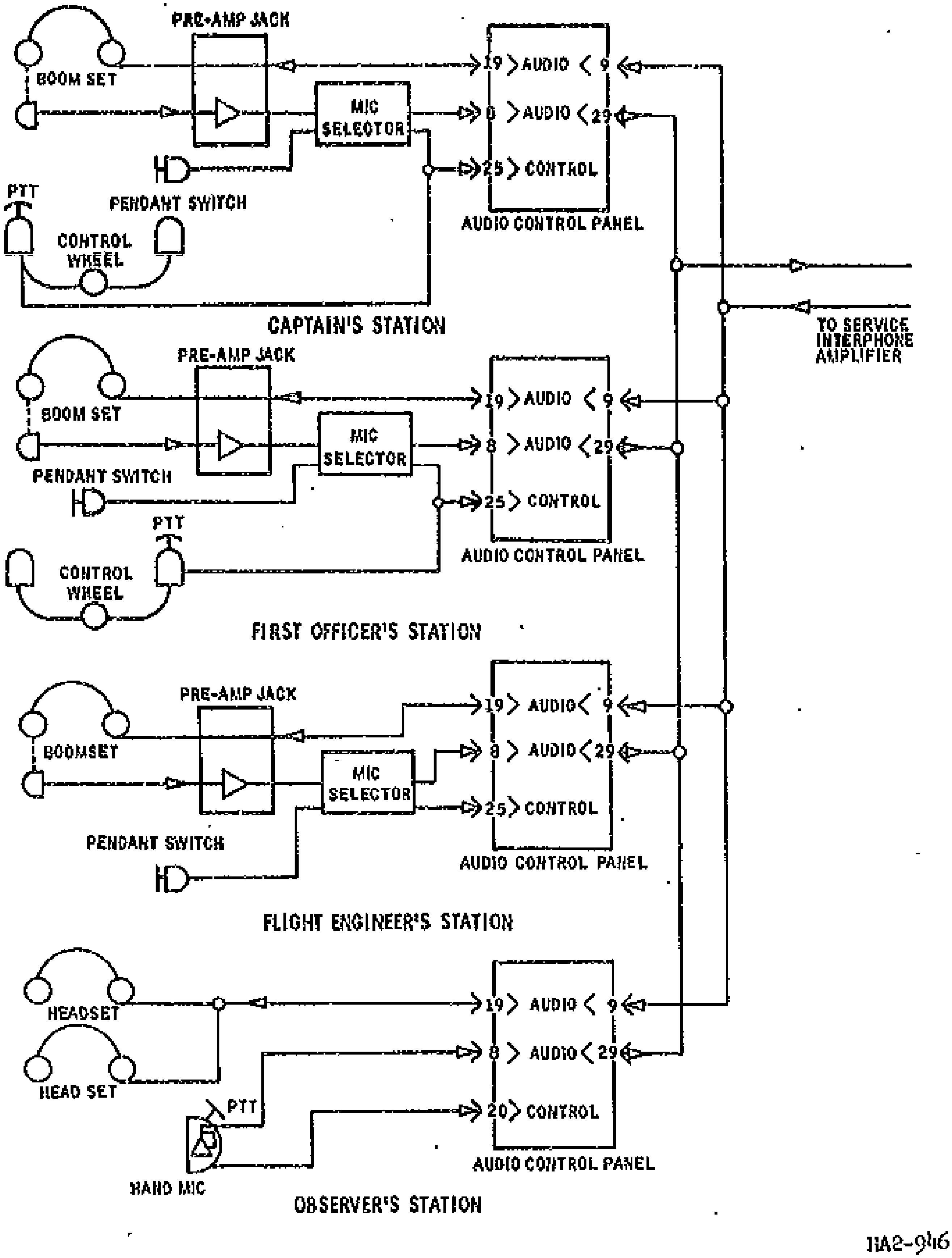
B. The service interphone audio amplifier is installed in the outboard radio rack on shelf 5 and provides the necessary audio amplification for service and maintenance operation communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. Electrical connections are made through a receptacle mounted on the amplifier. The amplifier input and output are connected to the audio control panels and to the jack outlets. Power is supplied by the battery bus.

C. Standard interphone jack outlets are installed in the flight compartment, in the nose wheel well, and in the vertical stabilizer. Explosion-proof jack outlets are installed in the air conditioning compartment, in the ceiling area of the forward baggage compartment, in the left and right wing trailing edge, in the pressurized compartment forward of the aft pressure dome, in each engine nacelle accessible from outside the nacelle, in the accessory compartment, in each main gear well, and in the tail cone.

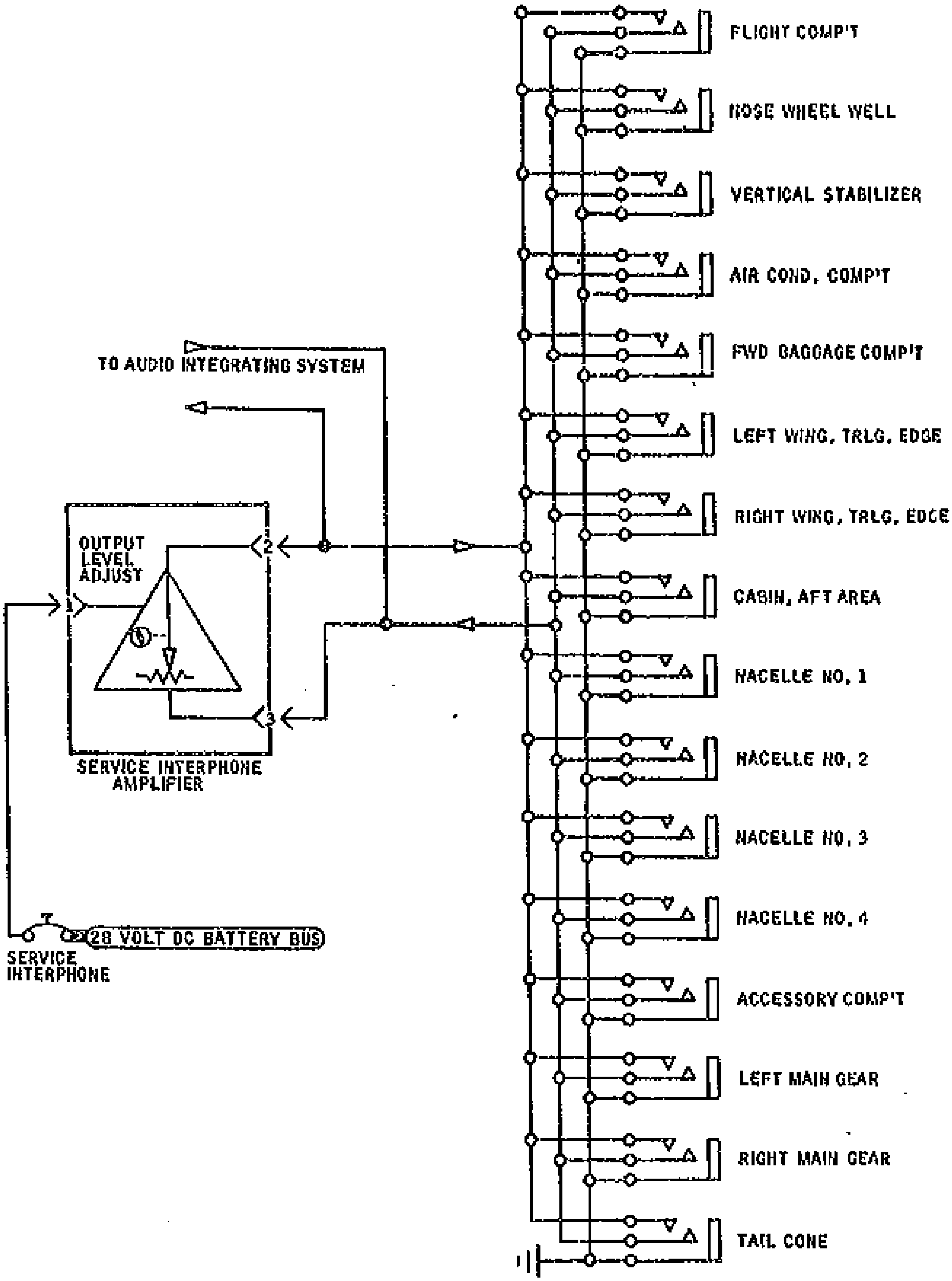
2. Operation

A. Operation from jack outlets - With a handset jack or a boomset jack inserted into a jack outlet and push-to-talk switch depressed, the microphone audio is connected to the amplifier and amplified. Amplifier output is connected to all jack outlets and to the audio control panels.

B. Operation from audio control panels - With the microphone selector switch positioned to the service interphone and interphone volume to CW position, using any microphone and depressing the associated push-to-talk switch, microphone audio is connected to the interphone amplifier and amplified. Amplifier output is connected to all interphone jack outlets and to all audio control panels. The microphone selector switch routes the audio to the associated station headsets and loudspeakers.



Service Interphone Audio Integrating -- Simplified Schematic
Figure 1



Service Interphone Jack Outlets --
Simplified Schematic
Figure 2

3. To Operate System

A. To operate from jack outlets -

(1) Energize electrical buses.

(2) Place switches and controls to position indicated:

Control	Position
Handset or boomset jack	Jack inserted
Push-to-talk switch	Depressed

B. To operate from audio control panel -

(1) Energize electrical buses.

(2) Place switches and controls to position indicated:

Control	Position
Microphone selector switch	Service interphone
Interphone volume control	CW position
Push-to-talk switch	Depressed

SERVICE INTERPHONE - TROUBLE SHOOTING

1. Trouble Shooting

Possible Causes	Isolation Procedure	Correction
A. NO INTERPHONE COMMUNICATIONS AT ALL STATIONS.		
(1) No power	(a) Visually check service interphone circuit breaker. (b) Check power input to amplifier with coltmeter.	(a) Close circuit breaker, if open. (b) Repair or replace faulty wiring.
(2) Faulty amplifier	Interchange amplifier with one known to be serviceable	Replace faulty amplifier.
(3) Faulty aud'o signal wiring on amplifier output or input.	Check audio signal wiring for continuity.	Repair or replace wiring as necessary.
NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.		
B. NO INTERPHONE COMMUNICATION AT ONE JACK OUTLET STATION.		
(1) Faulty handset.	Check handset using station known to be serviceable.	Replace faulty handset.
(2) Faulty jack outlet.	Check jack outlet for continuity.	Replace faulty jack outlet.
(3) Faulty audio signal wiring.	Check audio signal wiring for continuity.	Repair or replace faulty wiring.

Possible Causes	Isolation Procedure	Correction
C. VOLUME TOO HIGH OR TOO LOW AT ALL STATIONS		
(1) Amplifier out of adjustment.	Adjust volume control on amplifier (See 23-41-1).	If adjustment is not satisfactory, replace amplifier with one known to be serviceable.
D. NO INTERPHONE COMMUNICATION AT ONE AUDIO CONTROL PANEL		
(1) No power on system	Visually check associated station audio integrating circuit breaker.	Close circuit breakers, if open.
(2) Faulty microphone	Check microphone at station known to be serviceable.	Replace faulty microphone.
(3) Faulty audio control panel	Interchange audio control panel with one known to be serviceable.	Replace faulty audio control panel..
(4) Faulty audio signal wiring	Check audio signal wiring for grounds and continuity.	Repair or replace faulty wiring.

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SERVICE INTERPHONE - MAINTENANCE PRACTICES

1. General

A. The service interphone jack outlet wiring is as follows: tip, receiver audio; ring, microphone audio; sleeve, audio common. To communicate between any two jack outlet stations, insert handset or boomset jack into outlets and depress push-to-talk switch. If a jack outlet is replaced, establish communications between jack outlet and any other jack outlet or an audio control panel. If an audio control panel is replaced, perform the service interphone test at the affected station.

2. Adjustment/Test Service Interphone

A. Test Service Interphone

NOTE: The observers headset should be employed in the flight compartment service interphone jack outlet located at the flight engineer's station to monitor audio during test.

	Operation	Station	Desired Result
(1)	Place audio control panel communication and navigation receiver audio control knobs and switches to off.	Captain's First officer's Flight engineer's Navigator's	Isolation of all radio receiver audio.
(2)	Place audio control panel microphone selector switch to service interphone.	Captain's First officer's Flight engineer's Navigator's	Station on service interphone.
(3)	Place loudspeaker volume control to full CCW.	Captain's First officer's	Corresponding loudspeaker muted.
(4)	Place microphone selector panel switch to boom normal.	Captain's First officer's	Selection of boomset microphone.

	Operation	Station	Desired Result
(5)	Employ boomsets, press pendant switch push-button, and speak into microphone with normal tone. Turn volume control CW and CCW, then place to comfortable level.	Captain's First officer's Flight engineer's	Boomset audio varies smoothly, clearly, and distinctly, with volume control rotation.
(6)	Release pendant switch push-button.	Captain's First officer's Flight engineer's	End check at station.
(7)	Employ hand microphone and headset, press hand microphone push-to-talk switch and speak into microphone with normal tone. Turn volume control CW and CCW, then set to comfortable level.	Navigator's	Headset audio varies smoothly, clearly, and distinctly, with volume control rotation.
(8)	Release push-to-talk switch.	Navigator's	End check at station.

SERVICE INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

A. The service interphone amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier to a satisfactory level. The service interphone amplifier is identical to and interchangeable with the cabin interphone amplifier and the audio integrating amplifier. The amplifier is housed in a 2 3/32-inch by 2 5/32-inch box and attached to a mounting plate with two screws that extend through the housing to the mounting plate. The amplifier is installed in the outboard radio rack on shelf 5.

2. Removal/Installation Service Interphone Amplifier

A. Remove Service Interphone Amplifier

(1) Open service interphone circuit breaker installed in -- circuit breaker panel and located on -- battery bus.

WARNING: TAG AND SAFETY CIRCUIT BREAKER.

(2) Remove radio rack panel from shelf 5.

(3) Remove attaching screws and remove amplifier from mounting plate.

(4) Disconnect electrical connector.

B. Install Service Interphone Amplifier

(1) Ensure that -- service interphone circuit breaker is open.

(2) Connect electrical connector.

(3) Place amplifier on mounting, and secure with attaching screws.

(4) Install radio rack panel.

(5) Close service interphone circuit breaker.

(6) Perform Adjustment/Test Service Interphone. (See 23-41-0.)

3. Adjustment/Test Service Interphone Amplifier

A. Adjust Service Interphone Amplifier

(1) Establish communications between any two service jack outlets.

(2) Adjust interphone amplifier volume control for satisfactory volume level.

CABIN INTERPHONE - DESCRIPTION AND OPERATION

1. General

A. The cabin interphone system provides flight crew members communications between the flight compartment and the cabin attendant stations. The system consists of flight compartment hanger and switch, cabin attendant panels, public address/interphone control relays, an audio amplifier, and handsets. The cabin interphone system is integrated with the public address system with the exception of the audio amplifier.

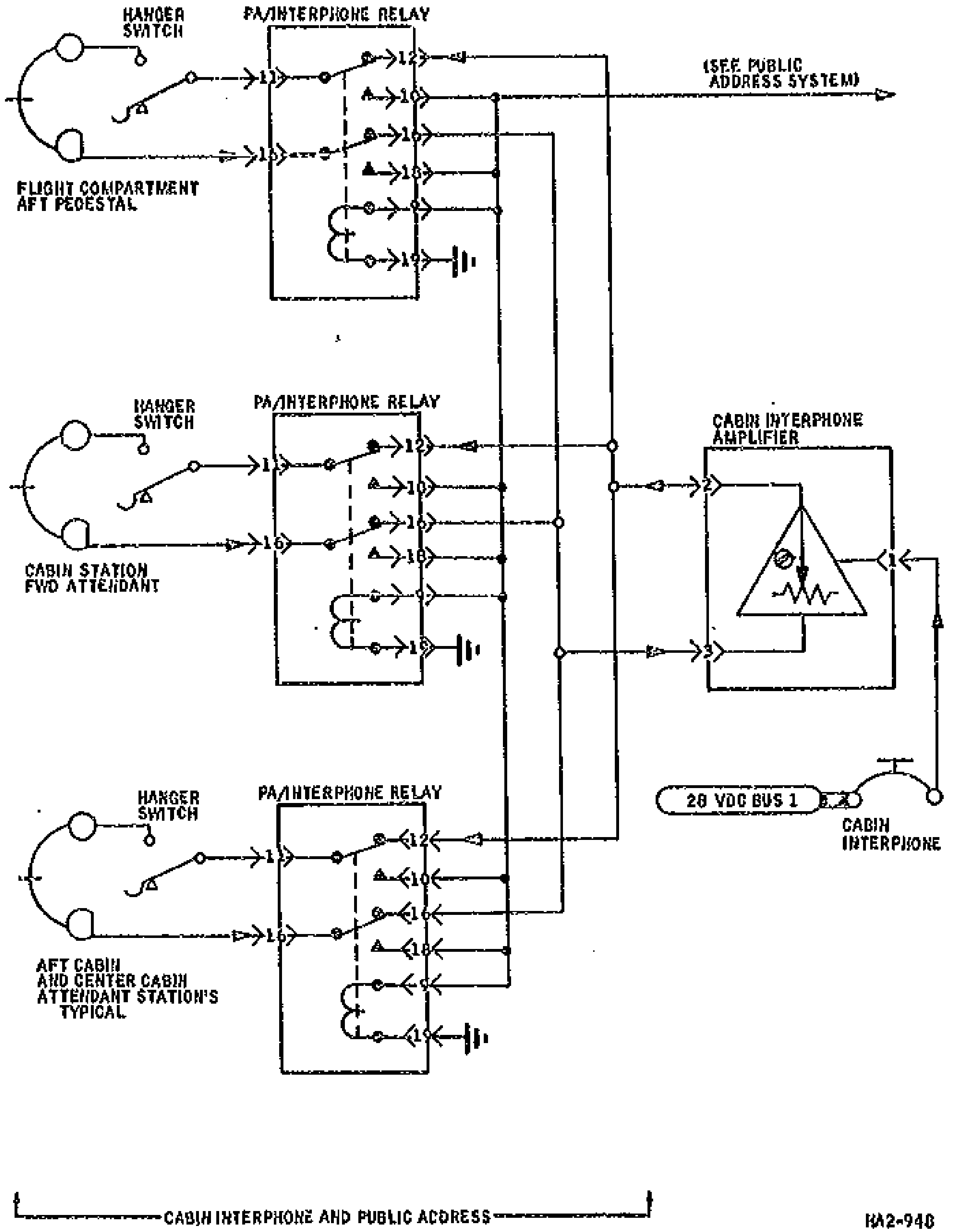
B. The flight compartment hanger and switch is installed on the aft pedestal. Removal of the handset from the hanger operates the hanger switch. The hanger switch connects the handset receiver to the control relay.

C. A cabin attendant panel is installed at the forward attendant's station, aft attendant's station, right and left hand center attendant's stations. On airplanes N8070U-N8076U only one center attendant's panel is installed. In conjunction with the interphone system, each panel contains a handset hanger and switch and selective call switches. Removal of the handset from the hanger operates the switch to connect the handset receiver to the control relays. The selective call switches alert the flight personnel for station to station communications and deenergize the control relay if energized by the passenger address system.

D. The passenger address/interphone control relays are installed in the radio rack and a relay is provided for each handset station. The control relay connects the handset audio signal wiring to the cabin interphone audio amplifier when the control relay is deenergized. The control relay is energized when public address announcements are made. Electrical connections are made through the receptacle mounted on the relay housing.

E. The cabin interphone audio amplifier is installed in the radio rack on shelf 5 and provides the necessary audio amplification for flight personnel communications. The amplifier contains an input transformer, input gain control, transistorized audio amplifier, and an output transformer. A screwdriver access hole is provided through the amplifier chassis to adjust the input gain control. Electrical connections are made through a receptacle mounted on the amplifier chassis. The amplifier input and output are connected to the control relays by the audio signal wiring. Power is supplied by dc bus 1.

F. A handset is installed in the flight compartment and in each cabin communication panel. Each handset consists of an audio receiver, microphone and a push-to-talk switch. The handsets are automatically connected to the interphone system when the handsets are removed from the hanger or when a selective call switch is pressed. The handset receiver is connected to the audio signal wiring by the hanger switch and the microphone is connected to the audio signal wiring by the push-to-talk switch.



Cabin Interphone -- Simplified Schematic
Figure 1

2. Operation

A. With the handset removed from the hangar and the push-to-talk switch pressed, handset audio is connected to the amplifier and amplified. Amplifier output is connected to all handset stations.

3. To Operate System

A. To Operate Cabin Interphone

(1) Energize electrical bus

(2) Place switches and controls to position indicated.

Control	Position
Handset	Removed from hangar
Push-to-talk switch	Depressed

CABIN INTERPHONE - TROUBLE SHOOTING

1. Trouble Shooting

Possible Causes	Isolation Procedure	Correction
A. NO CABIN INTERPHONE COMMUNICATIONS AT ALL STATIONS.		
(1) No power	(a) Visually check circuit breakers.	(a) Close circuit breakers if open.
	(b) Check power input to amplifier with voltmeter.	(b) Repair or replace faulty wiring.
(2) Faulty amplifier	Interchange amplifier with one known to be serviceable.	Replace faulty amplifier.
(3) Faulty audio signal wiring on amplifier output or input	Check audio signal for continuity.	Repair or replace faulty wiring.
NOTE: When repairing or replacing audio signal wiring, ground shielding at same ground studs used by original wiring. Use same routing as original when replacing wiring run.		
B. NO CABIN INTERPHONE COMMUNICATION AT ONE STATION		
(1) Faulty handset	Check handset using station known to be serviceable.	Replace faulty handset.
(2) Faulty jack outlet	Check jack outlet for continuity.	Replace faulty jack outlet.
(3) Faulty audio signal wiring	Check audio signal wiring for continuity.	Repair or replace faulty wiring.

	Possible Causes	Isolation Procedure	Correction
C.	VOLUME TOO HIGH OR TOO LOW AT ALL STATIONS		
(1)	Amplifier out of adjustment	Adjust volume control on amplifier. (See 23-42-1.)	If adjustment is not satisfactory, replace amplifier with one known to be serviceable.

CABIN INTERPHONE - MAINTENANCE PRACTICES

1. General

A. Perform the cabin interphone test if the cabin interphone amplifier is replaced. Perform the cabin interphone test and the passenger address and entertainment test if a component, such as a hanger switch (see 23-20-0) or a handset (see 23-20-2), is replaced. The selective call system is utilized in conjunction with the cabin interphone test.

2. Adjustment/Test Cabin Interphone

A. Test Cabin Interphone

	Operation	Station	Desired Result
(1)	Remove handset from hangar	Flight compartment	Handset connected to cabin interphone.
(2)	Press pilot to attendant call switch	Flight compartment	Pilots' call light comes on and chime sounds at attendants stations.
(3)	Remove handset from hangar	Forward attendant Aft attendant	Handset connected to cabin interphone.
(4)	Press reset push-button	Forward attendant Aft attendant	Pilots' call light goes out.
(5)	Press handset push-to-talk switch and alternately communicate between stations.	Flight compartment Forward attendant Aft attendant	Communications are clear and distinct, and handset microphone outputs are evenly matched.
(6)	Replace handset in hangar	Flight compartment Forward attendant Aft attendant	End test.

CABIN INTERPHONE AMPLIFIER - MAINTENANCE PRACTICES

1. General

A. The cabin interphone amplifier should be replaced if the volume of the amplifier is extremely high or low. If a minor adjustment is required, adjust the amplifier to a satisfactory level. The cabin interphone is identical to and interchangeable with the service interphone amplifier and the audio integrating amplifier. The amplifier is housed in a 2-3/32-inch by 2-5/32-inch box and attached to a mounting plate with two screws that extend through the housing to the mounting plate. The cabin interphone amplifier is installed in the outboard radio rack on shelf 5.

2. Removal/Installation Cabin Interphone Amplifier

A. Remove Cabin Interphone Amplifier

(1) Open cabin interphone circuit breaker installed in circuit breaker panel and located on dc bus 1.

WARNING: TAG AND SAFETY CIRCUIT BREAKER.

(2) Remove radio rack panel from shelf 5.

(3) Remove attaching screws and remove housing from mounting plate.

(4) Disconnect electrical connector.

B. Install Cabin Interphone Amplifier

(1) Ensure that cabin interphone circuit breaker is open.

(2) Connect electrical connector.

(3) Place amplifier housing on mounting plate and secure with attaching screws.

(4) Install radio rack panel.

(5) Close cabin interphone circuit breaker.

(6) Perform Adjustment/Test Cabin Interphone. (See 23-42-0.)

3. Adjustment/Test Cabin Interphone Amplifier

A. Adjust Cabin Interphone Amplifier

(1) Establish communications between any two handset stations.

(2) Adjust interphone amplifier volume control for satisfactory level.